RACE, MEDICINE, AND HEALTH CARE IN THE UNITED STATES: A HISTORICAL SURVEY

W. Michael Byrd, MD, MPH and Linda A. Clayton, MD, MPH

Boston, Massachusetts

Racism in medicine, a problem with roots over 2,500 years old, is a historical continuum that continuously affects African-American health and the way they receive healthcare. Racism is, at least in part, responsible for the fact African Americans, since arriving as slaves, have had the worst health care, the worst health status, and the worst health outcome of any racial or ethnic group in the U.S. Many famous doctors, philosophers, and scientists of each historical era were involved in creating and perpetuating racial inferiority mythology and stereotypes. Such theories were routinely taught in U.S. medical schools in the 18th, 19th, and first half of the 20th centuries. The conceptualization of race moved from the biological to the sociological sphere with the march of science. The atmosphere created by racial inferiority theories and stereotypes, 246 years of black chattel slavery, along with biased educational processes, almost inevitably led to medical and scientific abuse, unethical experimentation, and overutilization of African-Americans as subjects for teaching and training purposes. (*J Natl Med Assoc.* 2001;93(suppl)11S-34S).

Key words: racism ♦ health outcomes ♦ slave health deficit

Race, and its by-product racism, are major factors in the U.S. health system and help define one of America's health dilemmas.* Their human consequences are ubiquitous, yet their effects throughout the health system are seldom acknowledged, and often downplayed. The shock waves generated throughout the country by the Schulman et al. article in the New England Journal of Medicine unequivocally documenting racial and gender bias distorting clinical decision making, suggests how pervasive the race problem is, and how every effort must be expended to understand, explain how and why, and, eventually, correct the deleterious effects race and racism have on American medicine and the health system.

From the American health system's very beginnings, race has been, and remains, a pervasive yet enigmatic issue. Race is important in American health and health care, whether viewed from the perspective of racism adversely affecting clinical decision-making regarding patients;[1] white indifference to the African-American Health crisis;[2] continuation of discriminatory barriers to African American entry into the prestigious health professions, and unfair and biased treatment after blacks become physicians, dentists, nurses, etc.; main-

 From the Harvard School of Public Health, Division of Public Health Practice, Boston, MA. For reprints contact Dr. Michael Byrd, Harvard School of Public Health, Division of Public Health Practice, 677 Huntington Ave., Boston, MA 02115.

*America's racial health dilemma hereafter refers to the conflict between what the U. S. preaches in its creed compared to what it practices. This refers specifically to the conflict between the belief in the principle that everyone deserves access to high quality health and health care necessary to fulfill their human potential, and the reality, in the U.S., of the inequitable distribution and beneficence of health care on the basis of race, class, gender, and the ability to pay.

stream acceptance of racial differentials in health status and outcomes as normal;[3] the repeated refusal of health researchers or the public to attribute racially differential or discriminatory results of scientific studies, health status indicators, or health outcome measures to race or racism; or as a factor in the irrational resistance to the creation of a universal, unitary, health system in the U.S. A capsule inquiry into the surprisingly intimate relationship between race, medicine, and health care in Western, and American society, is presented here to enhance the readers' knowledge and assist their perspective and insight into these subjects. Fact-based assessment, conceptualization and placing in proper context the effects and significance of race in contemporary American medicine, health, and health care will help end health system denial, evoke rational acknowledgment of the system's racial problem, and produce pro-active measures to correct, and eventually, ameliorate it. Establishment of a health policy institute focusing on the health concerns of African-American and other health-disadvantaged populations along with programs leading to the production of a culturally competent† healthcare workforce represent direct, meaningful, cost-effective first steps.[4]

METHODS

This summary article on American scientific racism and the relationship between race, medicine, and health care represents only a sampling of the sizable database accumulated over the past 30 years by the authors on these subjects, but can serve as a source of preliminary references. Fully documenting and contextualizing such complex topics require book length coverage.[5] This review serves to provide definitions, analytical tools, and background information on the effects of race and racism on the scientific/medical community and how these effects are inextricably linked over time with the creation and promulgation of a racially oriented, inequitable, medical-social culture and health delivery system. The article will help the reader comprehend the pathology within the U.S. biomedical and health system and understand how the racist ideas, concepts, ideology, beliefs, attitudes, and practices created and perpetuated by the medical and scientific professions helped produce the results seen in the Georgetown study,[1] but, more importantly, have negatively affected the health status, outcomes, and access to services of African Americans for generations.

Much of the material in this study breaks new ground. It is either new to the health care literature or has been compiled, analyzed, and reinterpreted in an unprecedented manner. Moreover, in order to resurrect much of the black medical history, medical-social history and health policy, it has been necessary to consult source materials such as anthropology, sociology, biography, or general history. Though these new compilations and reinterpretations clarify much of the African American medical-social and health-historical experience, they resurrect areas of scholarship unfamiliar to the biomedical scientific community and may generate hotbeds of potential controversy. For these unique reasons, to lessen the potential for controversy and decrease the material's veracity being questioned, some of the text may seem over-documented compared to conventional studies. Hostile scrutiny, for example, has been leveled at recent, black, revisionist scholarship published by Van Sertima, Charles Finch, Martin Bernal, and St. Clair Drake.[6] As the uproar over the reception of their work proves, any scholarship involving the reassessment of American concepts of race, racism, Western or American history calls forth contentiousness, defensiveness, and allegations of intellectual dishonesty.[7]

RACE AS A SOCIOCULTURAL CONCEPT AND TOOL FOR ANALYSIS

Ancient founders of science's precursors began the hierarchical and discriminatory cycle suggesting that race might be a means of classifying mankind. Driven

†Cultural competence involves the capacity of practitioners, systems, agencies, and institutions capacity to respond appropriately to the unique needs of populations whose cultures are different from that which might be called "dominant" or "mainstream." Becoming culturally competent is a developmental process and involves a continuum that ranges from cultural destructiveness to cultural incapacity, cultural blindness, cultural pre-competence, cultural competence, and, finally, to cultural proficiency.

The culturally competent individual or system values diversity, has the capacity for cultural self-assessment, is conscious of the dynamics inherent when cultures interact, possesses institutionalized cultural knowledge, and has developed adaptations to diversity. Source: U.S. Department of Health and Human Services Cultural Competence for Evaluators: A Guide for Alcohol and Other Drug Abuse Prevention Practitioners Working With Ethnic/Racial Communities. Rockville, Maryland Office for Substance Abuse Prevention, Alcohol, Drug Abuse, and Mental Health Administration, DHHS Publication No. (ADM)92-1884, 1992.

since ancient times by folk beliefs and social customs based on differences in physical appearances of various geographic populations, by the 17th century race became a subject of formal theoretical speculation and scientific investigation. Thus, race has been a focus of Western empirical and scientific inquiry for more than four centuries. By the early 20th century the traditional ideas of race and races of man, which became dominant during the rise of science during the 18th and 19th centuries, began falling apart as more objective anthropological, paleontological, genetic, and DNA studies proved the unity of the human species, common African origins of all racial groups, and the biological insignificance of the old parameters of classification such as skin and eye color, hair texture, physical features, and skull size and shape. Yielding to a deluge of scientific evidence, race has come to be more objectively considered a sociocultural concept wherein groups of people sharing certain physical characteristics are treated differently based on stereotypical thinking, discriminatory institutions and social structures, and shared social myths.

The conceptualization of race has moved from the biological to the sociological sphere with the march of science. For example, physical anthropologists have called races the various sub-species of *homo sapiens* characterized by certain phenotypical and genotypical traits (e.g., Mongoloid or Negroid). As recent as the early part of the 20th century, laymen and some scientists used the word race to describe human groups that shared particular cultural characteristics such as religion or language (e.g., the "Jewish race" or the "French race"). Some modern zoologists refer to subspecies or varieties as synonymous with a race: a partially isolated breeding population with some differences in gene frequencies from other related populations. Van den Berghe offers a precise and simple sociological definition of race, referring "to a group that is *socially* defined but on the basis of *physical* criteria."[8] Interestingly, since there are virtually no biologically significant or inherent differences within the species *homo sapiens,* what happens to people after van den Berghe's social selection takes place is the determinative and significant factor about race.

After determining what race is, a further definition is required for racism–the nefarious by-product that produces bad results and outcomes for the persecuted race. Van den Berghe defines racism as any set of beliefs that organic, genetically transmitted differences (whether real or imagined) between human groups are intrinsically associated with the presence or the absence of certain socially relevant abilities or characteristics, hence that such differences are a legitimate basis of invidious distinctions between groups socially defined as races.[9] To gain understanding of how racism works (the mechanisms) and creates its outcomes (through mediators), the authors found three paradigms to be the most useful and important.[10]

Van den Berghe summarized the differences between the old-fashioned form of racism associated with slavery, *paternalistic racism,* and the more recent variety, *competitive racism.* In the former type, blacks were viewed as immature, irresponsible, improvident, fun loving, child-adults--inferior, but lovable as long as they did not deviate from clearly defined roles. This paternalistic racism allowed for extreme intimacy between certain classes of whites and their slaves, while maintaining social distance. In this paradigm, the prejudiced white superior "loved" and was committed to the dependent black who was "loyal and loved" the master in return. Resistance or rebellion by the slave triggered extreme brutality. With the abolition of slavery, however, the poor and working class whites, who were the majority and assumed control, would no longer accept the slaveowners' paternalistic image of blacks as good children or pets. To them blacks were seen as clannish, uppity, insolent, aggressive, dishonest competitors for scarce resources. Therefore, *competitive racism* became the dominant racist mechanism of modern U.S. society.

Robert W. Terry's investigations on racism have evolved over the past three decades, crystallizing in the concepts of *societal* and *individual* racism. Incorporating many of his original theories, Terry focuses on social and institutional mediators of racism defined through power relationships. These mediators include:

1. ***Power,*** the unfair distribution or disproportionate capacity by the dominant white/Anglo group to make and enforce decisions.
2. Differentially controlling ***resources*** such as money, education, information, and political influence by the dominant racial group.
3. Establishing societal ***standards*** according to dominant white/Anglo definitions, automatically marginalizing other group norms.
4. Incorrectly defining ***problems*** by the dominant white/Anglo group such that perceptions and solutions are distorted, inappropriate, manipulatable, and dysfunctional.

It is through the expression of 382 years of such power relationships–of which blacks possessed basic

citizenship rights for only 9.42%, or 36 years, of their American experience–that African Americans have experienced varying degrees of racial segregation, oppression, discrimination, and exploitation (Table 1). In the health arena, these principles can be applied in both historical and contemporary configurations. These theories also lend themselves to an understanding of the European American health system. Psychiatrist Joel Kovel devised a psychological paradigm of racism, focusing on European Americans as the source of the race problem. His *dominative racism* was based on direct physical oppression and sexual obsession, while the more modern *aversive racism* is characterized by avoidance of the dominant group (whites) based on isolation of the subordinate group (blacks). Grounded in complex and infantile psychological mechanisms, it helps explain the white flight to the suburbs and the creation of inner-city black ghettos with all the attendant problems of segregation, isolation, and inequality. The most subtle, modern, and malignant form of racism is Kovel's metaracism. It pervasively represents pure racism because it is systematic and independent of individual factors representing the last stage of racism that remains when racial passions have been washed away. *Metaracism* is ". . . the racism of technocracy, i.e., one without psychological mediation as such, in which racist oppression is carried out directly through economic and technocratic means."[11] It is the racism of differential taxation schemes that produces unequal, inner-city, public schools; fewer transplants and other highly desired invasive therapeutic procedures for blacks who have the highest rates of kidney and cardiovascular disease; racial profiling by law enforcement agencies and the criminal justice system; discrimination and selection for education and jobs based on white culture-based achievement tests; reverse discrimination, wherein white males are protected by Civil Rights laws designed to ensure blacks previously denied participation in American society; and computerized arrest record files for job screening in neighborhoods where most of the adolescent males experience police encounters (whether convicted of crimes or not). Because it incorporates the most advanced forms of domination, mutates into multiple chameleon-like configurations (whatever forms are necessary to carry out its racist mission), and is the most detached from the older, hate-filled, odious forms of racism leading to discrimination and overt and covert violence, *metaracism* is the dominant mode of racism in postmodern,‡ late capitalist, U.S. society. Has race always been this important in the realms of the Western and, later, U.S. life sciences and health care?[12]

RACE, SOCIETY, AND HEALTH IN AMERICA: A BACKGROUND

Black intellectual and biological inferiority has been an assumption in Western scientific and lay cultures for more than a thousand years.[13] For people of African descent, Western and, later, American life sciences and health systems have spawned this ideology along with nihilistic and sometimes negative health policies. By the 17th century, British colonization of North America, Western medicine and biology (then part of the natural sciences) had laid the foundations of racial inferiority. Unappreciated until recently, racism tainted the ancient precursors of what we refer to today as the biomedical sciences from their early beginnings. By coincidence or design, all the theoretical scientific and taxonomic efforts at racial and ethnic studies and categorization attempted since the Renaissance, placed dark complexioned people–especially those of African descent–in the bottom ranks of the human family. History-based precursors of scientific racism had profound and nefarious health and health care effects on enslaved Africans and, later, African Americans. Until recently, these issues and their implications have not been appropriately or adequately addressed.

Even if the racist proclamations of legendary medical luminaries like Galen (c. 130–201) or Avicenna (930–1037) had little effect on the clinical practice of medicine over the forty generations their philosophy and ideology dominated academic medicine, they certainly affected the minds of medical scholars and faculty members who dogmatically accepted and transmitted their teachings to European medical students until well into the 17th century. The scientific legitimization of the concept of inferior races of men by authoritative physicians and natural scientists not only appealed to ethnocentric European impulses and feelings of superiority, but justified and rationalized health policy stratification and, thus, contributed to medical status and outcome differences. Taking this state of affairs to its logical

‡Postmodern is a "family resemblance" term used in a variety of contexts (politics, art, music) for subjects related to a desire to critique Enlightenment values and truth-claims mounted by liberal-communitarian and neo-pragmatist persuasions, a relaxation of the pretense of high-modernist culture, and for a looser pluralism of styles.

Table 1. African-American Citizenship Status From 1619 to 1999

Time span	Citizenship status in years	Percent (%) of U.S. experience	Citizenship	Comments
1619–1865	246	64.40%	Chattel slavery	Abolition of Atlantic Slave Trade (1808) Black influx stopped Black immigration since, scant
1865–1965	100	26.18%	Virtually no citizenship rights	Thirteenth, 14th and 15th Amendments virtually nullified, legal segregation implemented 1896
1965–2001	36	9.42%	Most citizenship rights	School desegregation (1954). Civil Rights Act (1964), Voting Rights Act (1965) passed Apartheid, discrimination, institutional racism in effect.
1619–2001	382	100.00%	The struggle continues	Sum total

Data compiled from: Brinkley A. *The Unfinished-Nation: A Concise History of the American People,* New York: Knopf; 1991; Higginbotham A. *In the Matter of Color: Race and the American Legal Process: The Colonial Period,* New York, Oxford University Press; 1978; Kluger R. *Simple Justice: The History of Brown v Board of Education and Black America's Struggle for Equality.* New York: Knopf; 1976; Marable M. *Race, Reform and Rebellion: The Second Reconstruction in Black America,* 1945–1990, revised second edition, Jackson: University Press of Mississippi; 1991; Marshall TH. *Citizenship, Social Class and Other Essays,* Cambridge, England: Cambridge University Press; 1950.

conclusion, the better trained a 17th through 19th century European or American physician was, the more likely was he to participate in activities such as the Atlantic slave trade without attacks of conscience. Trainees entering the profession with open minds about race were trained to become prejudiced based on information in medical school curriculums (Fig. 1). Moreover, these "scientifically proven" disparities and discrepancies could be looked upon by professional and lay observers as inevitable and incorrectable. They could, thus, be viewed as events and outcomes determined by the natural order of things–or at the very least–fate. Such science buttressed ancient Western cultural traditions of ethnocentrism and racial prejudice.[14]

Before the concepts of race and racial inferiority were mobilized as legal defenses and justifications for chattel slavery in the antebellum U.S., they had profoundly affected the health and health care of enslaved Africans. English colonists were preoccupied with health as early as the Colonial era. Pragmatic Pilgrims and planters designated good health a prerequisite to engaging in the competition they valued so highly, and was observed as early as 1830 by De Tocqueville.[15] Therefore, legally sanctioned medical and environmental neglect of enslaved Africans and the institutionalization of an inconstant, often inferior, slave health subsystem§–processes which began in the 16th century–had profound implications and dire consequences. The slave health deficit transmitted from Africa by the Atlantic slave trade became institutionalized in English North America. In the embryonic health system, race became a marker almost as important as it was in the institution of slavery.[16]

§The slave health subsystem was an informal system of caregiving delivered by slave midwives, traditional healers, overseers, and planters wives sometimes backed up by formally trained white physicians (this usually ocurred in emergencies or when slaves were in extremis). This bulwark of health delivery for the slaves was, in fact, a 17th century extension of ancient African healing traditions.

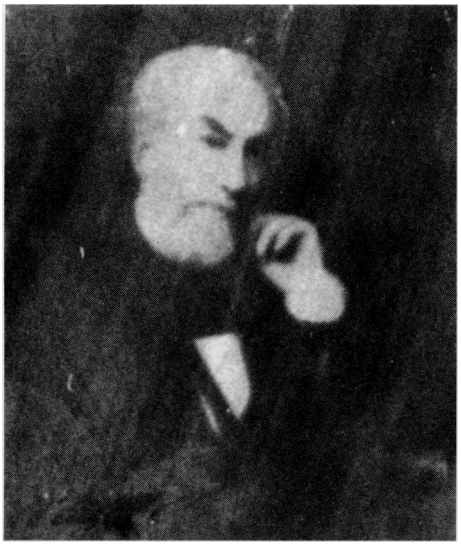

Figure 1. (A) Robley Dunglison (1798–1869): Father of American Physiology. He was a British born physician who published a popular medical textbook, *Human Physiology,* which espoused racial inferiority theories.

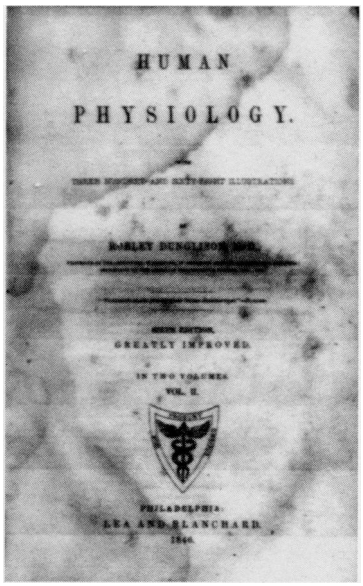

Figure 1. (B) *Human Physiology* (1841): Title page. This popular 19th century textbook was used in medical school curricula and contained what was considered requisite racial material for the modern American medical student.

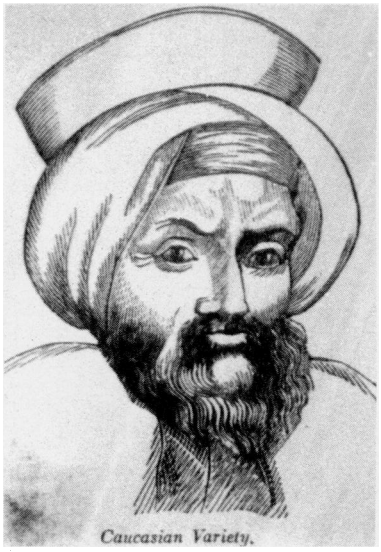

Figure 1. (C) Racial Types: *Human Physiology.* This is the illustration of the Caucasian racial type from Dunglison's book.

Figure 1. (D) *Human Physiology.* Of Cuvier's three racial types, Caucasian, Negro (Ethiopian type shown here), and Mongolian, Dunglison considered Negroes inferior alleging they held "a middle place between the Caucasian and the orangoutang."

Figure 1. (E) Racial Types: *Human Physiology.* This is the illustration of the Mongolian (Asian) racial type from Dunglison's book.

Parents.	Offspring	Degree of Mixture.
Negro and white,	mulatto,	½ white, ½ black.
White and mulatto,	terceron,	¾ — ¼ —
Negro and mulatto,	griffo or zambo, or black terceron,	¼ — ¾ —
White and terceron,	quarteron,	⅞ — ⅛ —
Negro and terceron,	black quarteron,	⅛ — ⅞ —
White and quarteron,	quinteron,	1⅛ — 1/16 —
Negro and quarteron,	black quinteron,	1/16 — 1⅛ —

Figure 1. (F) Table on Race Mixing: *Human Physiology.* Dunglison's book included a discussion on race mixing and racial "hybridization" and contained this table on the intricate systems and theories of race mixing then being practiced.

RACE, HEALTHCARE, AND THE WESTERN BIOMEDICAL SCIENCES

Race and Ancient Scientific Precursors

Many feel that Greece was the birthplace of Western science. Besides the changes wrought by their gifts of empiricism, objectivity, and logic, the Greeks brought their cultural predispositions toward ethnocentricity and intolerance. Since Western science's Greek beginnings the Great Chain of Being had been a major scheme of natural scientific classification.[17] This profoundly affected early taxonomic efforts, which represented an early and fundamental stage of scientific development. Greek scientific and medical forefathers such as Plato (428–348 B.C.) and Aristotle (384–322 B.C.) began arbitrarily assigning slaves of all races a lesser status within the human family. They speculated that slaves were inherently inferior and less intelligent.[18] Aristotle also may have displayed particular prejudices toward blacks and Asians.[19] Thus, the Greeks provided the first scientific paradigms in Western culture for future promotion of the biological concepts of black and non-white inferiority and assumed white superiority.[20] Health policy effects of such hierarchical ranking by physicians and natural scientists was evidenced by the fact that slaves began receiving scant and/or sub-optimal medical treatment by lesser trained slave assistant doctors during the Hellenistic and Roman periods.[21] Galen, a second century Roman physician of Greek origins whose teachings were accepted as sacrosanct by both practitioners and teachers of Western medicine for 1,500 years, promoted the concepts of black physical and psychological inferiority in his teaching and writings. Anointed a medical demigod, his teachings became a dominant stream within Arabic medical training and thought which followed. By 200 A.D., as a consequence of medical pedagogy and the slave system, Roman physicians, who were intellectually dominated by the Greeks, had arbitrarily ranked physical and psychological characteristics hierarchically based on slave status and race, with the traits of blacks assigned to the bottom ranks.[22]

Arabic culture added to Western civilization's burden of racial and color prejudice in medical, scientific, and lay circles during its dominance between the eighth and twelfth centuries. Moslem physicians, including the great Avicenna,[23] added their own anti-black prejudices to the racial biases inherited from Roman medical traditions dominated by Galen. How much this affected the health and health care of the black slaves is difficult to discern, however during this period, Moslem societies began for the first time to limit slave status to black Africans.[24]

The Renaissance, Race, and the Life Sciences

The Renaissance marked the separation of the natural sciences from philosophy. The Arabs and the Christian monks had preserved the Hippocratic (?c. 460–377 or 359 B.C.), Galenic, and Arabic medical traditions during the Dark Ages. This medical corpus was used by the first Western European medical schools and hospitals founded between the eighth and tenth centuries.[25] Based on previous epistemology, it contained some anti-black, racist, and biologic determinist material. Though most of the scientific reawakenings in the 15th and 16th centuries were concentrated in physics, astronomy, and mathematics based on the discoveries and innovations of Nicolaus Copernicus (1473–1543), Galileo Galilei (1564–1642), and Sir Isaac Newton (1642–1727), progress was evident in medicine and in the field of biology. Andreas Vesalius (1514–1564) almost singlehandedly placed scientific medicine on an anatomical foundation, and Ambrose Pare (1517?–1590) revitalized the art of surgery, placing it on a scientific footing in the process. Paracelcus (1493–1541), a Swiss physician and philosopher who resurrected empiricism and pharmacology in Western medicine also pioneered the notion of separate and unequal creations (an early version of polygenesis). Stannard, sensitive to the significance of Paracelsus' prejudices in *American Holocaust,* related the physician's argument that "Africans, Indians, and other non-Christian people of color were not even descended from Adam and Eve, but from separate and inferior progenitors."[26] Thus, like the rest of Western culture, medicine during the Ages of Discovery and Reason, when the English colonies were being founded, had a firm core of anti-black, racist, and biologic determinist, clinical and didactic teachings and practices that would be expanded upon for the next four centuries.[27]

Race and the Ages of Science and Enlightenment

The 18th century Enlightenment, whose roots lay in the previous century, represented multiple paradoxes for black and other non-white peoples. This was especially true for those in bondage. Philosophers such as Hobbes, John Locke, Rousseau, Voltaire, Montesquieu, and Diderot infused Western culture with the ideals of freedom–freedom from superstition, freedom from intolerance, freedom to know (knowledge was held to be the ultimate power), freedom from arbitrary authority of Church or state, freedom to trade or work without feu-

dal restrictions–though at the time these principles didn't apply to blacks or Native Americans. This philosophical movement ultimately led to the Age of Revolution, the American Bill of Rights, and the worldwide abolition of slavery. Simultaneously, it was a cruel irony that in this age of rapid scientific advance borne of the Age of Reason, blacks and other non-white people would be categorized as subhuman compared to white Western Europeans.[28]

While previously mentioned European physician-scientists led the advances in biology and medicine, some medical and scientific giants such as Anton van Leeuwenhoek (1632–1723), the Father of Microscopy, Marcello Malphighi (1628–1694), the Father of Histology, and Carl Linnaeus (1707–1778), the Father of Biological Classification, lent their names to speculations which served to establish blacks in both the scientific and popular mind as a separate, possibly deficient, species. For many, their writings also served as pseudoscientific proof that blacks were subhuman and inferior.[29] Thus, succeeding generations of internationally respected Western natural scientists and physicians provided mounting "evidence" that supported the Western European cultural assumptions of white superiority and black biologic and intellectual inferiority. Some other well-known contributors to this unfortunate "scientific" movement were biological and medical icons such as Petrus Camper (1722–1789), Johann Blumenbach (1752–1840), George Louis Leclerc de Buffon (1707–1788), and Georges Cuvier (1769–1832). A virtually universal assumption of black inferiority at the social, religious, and scientific levels also served to rationalize, legitimize, and intensify medical participation in the highly profitable colonial slave systems.[30]

Other than being a source of riches generated by the slave trade and remote colonies, blacks were distant curiosities to most Western Europeans during the Age of Reason. This generalization also applied to the European natural scientists and physicians living in Europe. They were little concerned with Africa or Africans except as investment sources of profit or loss. This contrasted strongly with the situation in the colonies where both the medical profession and the health care systems were strongly affected by the institution of slavery. On the overt level, especially in the American South, there were slave ship surgeons and a slave health subsystem. These circumstances were tempered by the fact enslaved Africans only received medical care when it was clearly profitable (from their owner's perspective) to render it, and were often admitted as patients to the often dangerous almshouses, pesthouses, medical school and poorhouse hospital facilities which were provided for slaves and the "unworthy" poor.[31]

Such institutions were the dregs of the health system of that period. In addition to these adverse circumstances, there were no requirements or standards for providing health care or living standards for the slaves--which helps explain their poor health status and outcomes for blacks during that period. Being outside the mainstream or slave health sub-system, the few free blacks fared worse than the enslaved Africans healthwise. Therefore, based on the documentary evidence available, overall black health status was the poorest of any group in the North American English colonies during the Colonial and Republican eras and was always based on the exigencies of the slave system.[32]

Medicine, Biology, Slavery, and Scientific Dominance

By the 19th century, racially oriented European pseudoscientific data, along with that produced by the American School¶ of anthropology, was being used in the U.S. to justify and defend black slavery. Because of the increasing cultural authority granted America's scientific and medical communities, the nation's worship of the new science buttressed America's commonly held racial mythology. When physicians and natural scientists such as Johann Friedreich Blumenbach, Louis Agassiz, Samuel George Morton, Josiah Clark Nott, and Ernst Haeckel (1834–1919) lent their internationally acknowl-

¶The "American School" of anthropology was a scientific movement spearheaded by Samuel George Morton (1799–1851), internationally known University of Pennsylvania School of Medicine faculty member and naturalist. He was also president of the Academy of Sciences. The group of scientists was internationally recognized for theories espousing separate creations of the races of mankind (polygeny) and the biological inferiority of blacks and non-whites based on scientistic, numerical, and statistical evidence. Other members included physician and naturalist Louis Agassiz (1807–1873), the nation's academic leader of biology and paleontology residing at Harvard; Josiah Clark Nott (1804–1873), Penn medical school graduate and international authority on race and ethnology; Samuel Cartwright (1793–1863), Penn medical school graduate, faculty member at several Southern medical schools, scientific and lay writer, and lecturer on the medical separateness and inferiority of African Americans; and a cast of ancillary figures such as antiquarian George Gliddon (1809–1857) and naturalist Ephraim G. Squier (1821–1888). Previously, all leading scientific movements had come from Europe.

edged credibility, prestige, and intellectual credentials to the ethnic notions of black inferiority–some alleging that blacks constituted the "missing link" between apes and man–it was devastating to black people.[33]

This assumption of animal-like, racial inferiority also proved to be devastating for the delivery of health care to blacks.[34] European and American physicians, sworn to highly ethical humanitarian professional codes otherwise, had been prominent participants in the barbaric Atlantic slave trade and brutal New World slave health systems.[35] The professional assumption of poor health as normal for blacks was promulgated by white American physicians–who went so far as to create a lexicon of "Negro Diseases" and alternate physiologic mechanisms based on race (Fig. 2)–well into the late 20th century.[36] All these factors aggravated and perpetuated the pattern of inferior, inconstant, or unavailable health care for people of African descent in the United States. The health care provided for the enslaved Africans and the few free blacks during this period was rarely the best available and continued to be tempered by the exigencies of the slave system.[37] The slave health deficit established early in America's Colonial and Republican eras continued through the Antebellum, Reconstruction, and Post-Reconstruction eras.[38]

The health status of the rare free blacks during the Antebellum period was a grim continuum. Persistent realities of absent or inadequate health facilities and services, medical exploitation for the sake of science, and poverty that had begun in the Colonial and Republican eras dictated that the health status of free blacks was as bad and often worse than that of the enslaved Africans. Not surprisingly, when all groups and time periods are included, overall black health status remained the poorest of any racial or ethnic group in America from its Colonial beginnings to the Civil War.[39]

Caste, race, and class problems also distorted the nation's hospital system from its beginnings. The nation's earliest hospitals such as the Philadelphia Almshouse, founded in 1732, and the New York Hospital, founded in 1771, discriminated against and sometimes medically abused black patients.[40] Public hospitals along with jails, almshouses, pesthouses, and the few public clinics where blacks were sometimes admitted, continued their roles as the dregs of the health system throughout the 18th and 19th centuries. Though these facilities were provided specifically for the destitute and unworthy poor, African Americans had only sporadic access to them.[41] Working, middle, and upper class whites of the time continued to receive their health care either in their physician's offices, a few private hospitals, or at home.[42] The data suggest the foundations of the American health delivery system were built on a class stratified, racially segregated, and discriminatory basis.[43]

The late 19th century marked the belated professionalization of the American medical profession and the assumption of medicine's formal stewardship over the country's health delivery system. Medicine had evolved from a craft of variegated skill, training, and prestige levels early in the 19th century into what would become America's most respected, influential, monolithic, and highly paid profession. With a few notable exceptions such as James McCune Smith (1811–1865), an 1837 graduate of the University of Glasgow medical school; John Sweat Rock (1825–1866), an 1852 American Medical College of Philadelphia graduate; and, Martin Robison Delany (1812–1885), Daniel Laing, and Isaac H. Snowden, who attended Harvard University medical school in 1850, black exclusion from the medical profession was a given.[44]

Race, Medicine, Biology and Reform: Late 19th and Early 20th Century America

Fueled by misinterpretations, distortions, and misrepresentations of Charles Darwin's (1809–1882) evolutionary theories, the pseudoscientific literature in both the social and natural sciences on black biological, psychological, and intellectual inferiority grew in volume, intensity, and influence.[45] By the late-19th and early-20th centuries, American medical journals and textbooks were laced with pseudoscientific racist principles, derogatory racial character references, and pronouncements of impending black racial extinction.[46] This climate of biological scientific racism along with the physical and legal atrocities being committed against black citizens served as the social setting and atmosphere in which the late-19th and early-20th century American hospital and medical education reform movements occurred.[47] Moreover, the American medical profession's de facto policy of racial segregation became their official national policy in the 1870s[48] as the profession wrote off African Americans as a debauched, "syphilis soaked," unfit race.[49]

Johns Hopkins University, America's premiere medical school which would guide American medical education over the next 70 years, opened with rigidly segregated classes, hospitals, and medical staff in 1893. The school would remain racially segregated throughout its period of medical education dominance into the 1960s. Seemingly, the only medical institutions in America where blacks were even conceptualized as normal

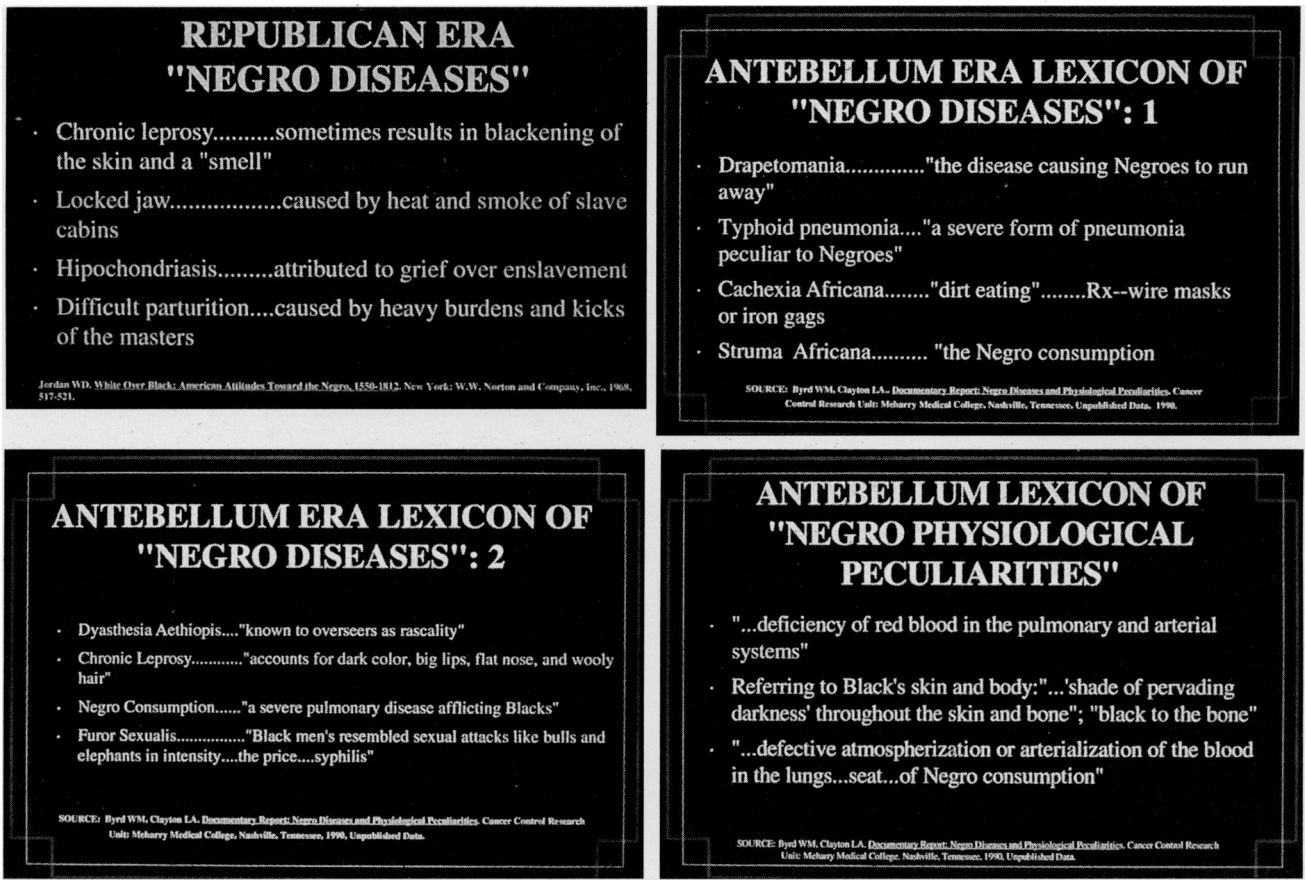

Figure 2. Lexicon of Negro diseases and Negro physiological peculiarities utilized by health professionals until the late 20th century.

human beings were the post-Civil War black medical schools and the few black hospitals and clinics. Organized medicine's official policy of racial segregation in the health system would remain in effect until they were challenged by landmark civil rights court decisions in the late 1960s.[50] Quietly, acknowledged by only a tiny cadre of black health professionals, the 300-year history of poor black health status and outcome in North America continued.[51]

By the 1920s, the basic infrastructure of the American health delivery system was in place.[52] Having been structured on the basis of racial segregation and class exclusivity, it was very stratified and unequal.[53] Virtually all of America's medical and health professions schools remained segregated according to race, gender, and class. The growing population of Northern urban blacks had varying access to an inferior tax supported, segregated tier of the nation's dual, unequal, health system.[54] During the early decades of the 20th century this system had come increasingly under white medical school control.[55] Hospital and health facilities continued to be rarities for the Southern black majority.

Meharry Medical College and Howard University School of Medicine functioned as virtually the sole sources of trained black medical and health care professionals between 1910 and 1970. Black underrepresentation in the medical profession rose to 2% levels around 1900 and remained there into the 1980s.[56] The black medical schools were systematically excluded from the medical school stewardship movement over urban public hospitals and health facilities over most of the 20th century.[57] Few realized this would generate future medical educational problems threatening black representation within the medical profession and the very survival of the black medical schools.

Black patients continued their traditional roles (the practice began during slavery with the rise of clinical

training, anatomic dissection, and clinical research in medicine) as being overutilized for medical demonstration, dissection, risky surgical and experimental purposes.[58] The Tuskegee experiment, for example, was an unethical, exploitive experiment in which treatment for syphilis was withheld from some 500 rural black, illiterate, poverty-stricken men. It was conducted for more than 40 years after starting in the early 1930s. For more than 30 years it was clear that the experiment subjected the men to excess morbidity and mortality, as the Tuskegee medical researchers deceptively told the men they were being treated.[59] It served as a marker for a common American research infrastructure problem.[60] The President of the United States formally apologized to the living Tuskegee survivors and the entire African-American population in 1998.

As a countervailing force against poor black health status in the 20th century the African American medical profession grew more active in black community and public health arenas. The tiny, black physician-led, well-intended but underfinanced black hospital and public health movements could do little to stem the tide of poor black health status and outcome.[61] Throughout the 20th century, African-American health professionals and researchers like W. E. B. Du Bois (1868–1963), Hildrus Poindexter (1901–1987), Paul Cornely (1906–), and M. Alfred Haynes (1921–) documented racial health differentials and poor black health status.[62] Nevertheless, until the federal government and the federal courts forced the issue in the 1960s, spurred by Civil Rights organizations in concert with W. Montague Cobb (1904–1990) and the NMA-led black medical profession, the health delivery system remained racially segregated, overtly stratified on the basis of race and class, and patently unequal.[63] The mainstream medical profession continued a pattern of discrimination toward African American and poor Americans as patients or peers and continued to support patterns of institutional racism, class bias, and professional racial discrimination in the health system into the 1990s. Disparate health status and outcome data have reflected these culturally destructive policies, practices, and health system environment.[64]

Race, Medicine, Health Care, and Civil Rights

The 1964 Civil Rights Act, hospital desegregation rulings in the federal courts, passage of Medicare and Medicaid, the Voting Rights Bill, and the health center movement created a Civil Rights Era in health care for African Americans. The black medical profession, usually represented by the NMA, was the dominant group of physicians** unanimously supporting these activities serving to open the health system to all patients regardless of race, class, or socioeconomic status.[65] Despite the fact the resulting health system changes were superficial and health care civil rights enforcement virtually nonexistent,[66] black health status improved dramatically for a decade after 1965. These improvements were due to increased access for large blocks of the African-American population to some health care, often for the first time, and the initiation of federal funding for health services.[67] Token efforts by white organized medicine at desegregating the medical profession and improving minority access to medical education were also made.[68]

As the commitment, political support, and funding for the special programs and shifts in health care financing and medical education which had been substituted for attacks on residential segregation, needed health delivery and education system structural changes, and equitable changes in health and public policies waned, black health progress halted in 1975.[69] Black health status has deteriorated since 1980, with African Americans continuing to suffer excess morbidity and mortality and having the highest death rates in 11 of the 13 leading causes of death. The black population began losing longevity in the mid-1980s for the first time in the twentieth century.[70]

Moreover, as we enter the new millennium the majority of African Americans remain demographically, economically, and socially segregated and isolated within our nation's depressed inner cities.[71] These areas continue their history of being medically underserved and subjected to substandard health care by the underfinanced, inferior, public tier of the nation's dual, unequal, health system.[72] Black representation in the medical profession, the only consistent spokesmen for blacks and the poor in the health system, is threatened by cuts in medical educational financing, failure to support the black medical schools, and a shift away from minority health priorities and affirmative action by white medical schools.[73]

Thus, the growing black underclass will continue to be served by the inferior public health subsystem and ignored by private sector medicine. The public institu-

**Small, independent, integrated groups of physicians such as the Medical Committee for Human Rights also crusaded for quality health care for all citizens.

tional infrastructure, though serving a laudable purpose, has not adequately met the health needs of black and poor populations for more than three centuries–with resultant and understandable poor health outcomes.[74] Without major reforms, it will continue its seemingly predetermined deficit-producing role. In the wake of a failed health reform effort, there are but few indications the present presidential administration, legislators, policy makers, or the medical industrial complex will implement public health, private, or government policies to correct these major health system structural deficiencies, ameliorate rampant residential segregation feeding the health disparities, rectify the institutional racism and class bias in the nation's health system, or remedy the longstanding, predictable, and now largely medically correctable race-based health deficits.[75] For a kaleidoscopic matrix of reasons, the slave health deficit has never been corrected. True to W.E.B. Du Bois's global prediction in 1906, in America's health system the color line has clearly been, remains, and will continue to be a dominant factor in black health outcomes in the U.S. for the foreseeable future.

SCIENTIFIC RACISM: THE U.S. PARADIGM

To fully appreciate the effects of race on U.S. health care, an understanding of scientific racism is required. The components that generate scientific racism are complex and are deeply imbedded in the health system subculture. The reach, affect, and impress of U.S. scientific racism are augmented and abetted by certain specific peculiarities of this country's racial culture and the American character. The scientific racism borne of this unique synthesis of components has profoundly impacted the 20th century medical profession, the rapidly growing health system, and the societal interactions surrounding health and health delivery in the U.S. The unique U.S. paradigm of scientific racism has roots stretching back into antiquity.

Chase defines it as "the perversion of scientific and historical facts to create the myth of two distinct races of humankind."[76] One group is defined as being traditionally composed of a small elite classified as healthy, wealthy (usually by inheritance), and educable. The lower group or race consists of a much larger portion of the population who are vulnerable, of low socioeconomic status (SES), and purportedly uneducable because of inherited, inferior, brains. Chase's definition casts a broad net but is an oversimplification of the panoply of observed affects of scientific racism in the U.S. It is grounded in positivist philosophical[‡‡] and popular notions that scientific racism is fundamentally a scientific by-product of the Industrial Revolution undergirded by political-economic considerations.

Chase acknowledged his restrictive definition of scientific racism originated in Thomas Malthus' (1766–1834) plea to stop providing relief for poor or underprivileged populations because doing so perpetuated inferior racial stock and undermined general social progress (Malthus was the first political economist, and author of the oft-quoted *An Essay on the Principle of Population* [1798]). That this led to the manipulation of science to preserve the status quo, justify social hierarchies, and decrease government and social spending on health and education for the poor is conceded. The proclamations of Malthus' disciples Herbert Spencer (1820–1903), the founder of social Darwinism (survival of the fittest), and Sir Francis Galton (1822–1911), who applied the new science of statistics to determining who should be allowed to reproduce (the eugenics movement), added force to the classical scientific racism movement that persists today. These developments are discussed in great detail in Chase's *The Legacy of Malthus* and resurfaced in *The Bell Curve* controversy and debate. Though Chase was not wrong–he attempted to focus too intensely on recent history (from the 19th century forward), negating the pernicious effects of several major streams of ideological and sociological thought that permeate Western and, later, U.S. scientific history and culture.

Examples abound. The world's four leading natural scientists of the 19th century, Georges Cuvier of France, Charles Darwin of England, Charles Lyell (1797–1875) of England, and Ernst Haeckel of Germany were adversely affected by contemporary beliefs about race and were participants, if not leaders, in the resulting scientific racism. Each believed in racial hierarchies, white superiority, and the inferiority of blacks. Leading 19th century American biomedical scientists such as Samuel George Morton and Louis Agassiz expressed similar

[‡‡]Positivism, until recently the dominant philosophy of Western science, holds that all phenomena were real, useful, certain, precise, organic and relative, and that all knowledge consists in the description of the coexistence and succession of such phenomena. Its theories of the nature, omni-competence, and unity of science vitiated the cognitive credentials of theory, metaphysics, ethics, aesthetics, religion, and non-naturalist social science (i.e., history, sociology).

opinions. Internationally renowned social and statistical scholars such as Herbert Spencer, William Graham Sumner (1840–1910), David Starr Jordan, and Frederich Hoffmann cleverly, if disingenuously, twisted Darwin's evolutionary theories to rationalize and scientifically justify America's social and racial hierarchies. What these men believed and wrote had far-reaching scientific and social impact throughout the 20th century.

In the U.S., much of the material on scientific racism emanated from medical schools and universities and was included in core curricula of the nation's leading educational institutions. Thus, as Allan Chase emphasized, at least five generations of well-educated Americans, including physicians, were brainwashed with this pseudoscientific, racist material. Influential early 20th century Americans such as Theodore Roosevelt, Oliver Wendell Holmes, Woodrow Wilson, Calvin Coolidge, and Warren G. Harding accepted this so-called scientific material at face value. Whether they had previously been racist or not, it undoubtedly influenced their policies in racialist directions.[77]

Allan Chase's definition of scientific racism suffers from being too reductionist in its construct and being over-reliant on its basis in positivist Western science and its history. His well-intended efforts at clarity and simplification negate the potent effects of U.S. social pathology, largely resulting from religious and ideological forces and historical memory based on race. These forces have had profound effects on U.S. society generally and the health system specifically. A more constructionist§§ re-examination of the concept of scientific racism, which broadens and more accurately describes its deleterious effects and uses, as far as African Americans are concerned, is indicated.

Rethinking the concept of scientific racism results in a more accurate definition of the term and enhances its utility as an explanatory hypothesis of what has actually taken place in the U.S. It can then more accurately reflect the devastatingly negative cumulative medical-social effects a largely nonscientific matrix of social, behavioral, and religious prejudices have had on the nation's scientific and health systems during their formative and evolutionary stages for black and poor people.

Though Chase conceded that the much older forms of gut racism based on religious, racial, and ethnic bigotry exacerbated the effects scientific racism had on certain ethnic and racial minorities,[76] he underestimated the virulent affects these factors, especially anti-black racism, have on the U.S. paradigm of scientific racism. Perhaps in Western European countries where, until recently, persons of color have been distant, even, minor concerns, his definitions would be more appropriate.[79]

The Blind Spot

The unique character of U.S. scientific racism helps explain the blind spot about race plaguing the nation's health system pointed out by Jones in his classic book, *Bad Blood: The Tuskegee Syphilis Experiment*, D.S. Greenberg in his 1990 *Lancet* article, and our 1992 *JNMA* article. Such an environment of American-style scientific racism hovering over the 20th century U.S. health system makes comprehensible the tradition of unethical experimentation on African Americans, racial-bias in clinical decision-making, a legacy of disproportionate levels of forced eugenic sterilization on blacks, the perpetuation of the overutilization and exploitation of the black population for medical teaching and demonstration purposes until recently (the recent reaction has been to exclude blacks to avoid controversy, for researcher convenience, and purportedly to decrease costs), the pervasiveness and popularity of discriminatory culturally biased IQ and standardized testing, and the current levels of exclusion of racial and ethnic minorities from mainstream medical research and clinical trials.

Understanding the mix and interactions between the following components and the classical concept of scientific racism articulated by Chase helps explain both the pervasiveness and stubborn persistence of the U.S. health system's race and class dilemma. These components include, but are not limited to scientific racism and its earlier historical roots including a Hippocratic-based Western medical ethical tradition, that is not sociologically friendly,¶¶ and is strongly based on values and covenants rooted in individual doctor-patient contracts, elite medical professional protections and prerogatives, and the systematic deemphasis on and exclusion of social concerns and the lack of a sense of community and the absence of compassion bred of the rugged individualism and self-help traditions ingrained in the

§§Constructionist refers to the socially formed dimensions of an inquiry. This type of inquiry includes elements such as the history, social dimensions, and cultural shaping an inquiry.

¶¶By sociologically friendly, we refer to the fact the Hippocratic tradition is built upon individual and not communitarian, doctor-patient, relationships, contracts, and covenants. Universality, or service to the entire society, is not a consideration.

American character. The complexity and depth of these forces and their influence on the nature of American scientific racism are some of the major reasons the U.S. health system has such difficulty purging itself of its race and class problems.[80]

These factors guaranteed that the U.S. health and health policy environment throughout the Progressive era and first half of the 20th century would be poisoned by scientific racism. Its effects endure in new but recognizable forms today. Imprecisely defined evolutionary and genetic theories, for example, were twisted by 20th century eugenicists and racial superiority advocates to manipulate the health system along with other major American institutions. The U.S. Army's World War I examination process was distorted to scientific racist ends, and the U.S. Congress was exploited to twist the immigration process in a prejudicial manner against Southern Europeans, Jews, Asians, and people of African descent. Even the Supreme Court was manipulated by the scientific racists to legalize unethical and eugenic sterilization policies by 1930. Clearly, the Western scientific legacy of racial typology and hierarchy was factor loaded against African American and ethnic American citizens as the U.S. health system evolved during the 20th century.

To speculate that this level of European and American-based scientific racism would have no effect on a U.S. health system already plagued by historical race and class problems is unreasonable. The pall of American scientific racism hovering over the health system helps explain the elite, discriminatory, nihilistic, and exclusionary health policies that had the effect of decimating poor blacks and mill workers throughout the 20th century, that generated the unethical Tuskegee experiment, that closed down vital black medical schools such as the Leonard Medical School at Shaw University, led to unethical hysterectomies performed on black women (laughingly referred to by white physicians as Mississippi appendectomies), and the evidence of black scientific exploitation present every day in research laboratories throughout the world in the unauthorized use (by her family) of Henrietta Lack's living cervical cancer tissue (HeLa cells) for research. The peculiar brand of U.S. scientific racism has served as a major adverse health and outcome factor for African Americans.[81]

In addition to the health effects of racism on patients, racism has also taken its toll of black doctors, black healthcare professionals, and their institutional infrastructure. Black doctors are victims to varying degrees of discrimination in the U.S. at both the personnel and professional levels. Until the Civil Rights Era, black doctors were almost totally denied membership in professional organizations such as the AMA and specialty societies. For the most part, black doctors were not permitted to have hospital privileges at white hospitals until the late 1960s. Since desegregation of the hospital system, black hospitals have been virtually eliminated. Racial discrimination against black doctors has continued during the past three decades and has included, but is not limited to: the peer review process, obtaining and maintaining hospital staff privileges, obtaining appointments on key hospital committees, virtual exclusion from many vitally important postgraduate specialty and sub-specialty training programs (e.g., neurosurgery), and obtaining faculty appointments at teaching hospitals. Discrimination continues against black doctors and their patients in medical practice, often through managed care mechanisms: economic credentialing of their patients and practices; exclusion from managed care panels; exclusion from invitations to join, or establish practices in lucrative settings; virtual redlining of certain communities on the basis of race, class, ethnicity, SES, and administrative/economic profiling. It is clear that racism has historically had a negative impact on the health status, health outcome, and health service delivery for black patients and the professionals and institutions that serve them.[82]

CONCLUSION

Historical analyses reveal that since ancient times anti-black racism and its antecedents have helped energize health system discrimination and deprivation against blacks–facilitating, if not producing, poor health status and outcome in the process; produced racism and scientific racism in the biomedical sciences; and facilitated medical and scientific exploitation and abuse. Geiger noted regarding race relations in the health system, "progress over the last 30 years has been substantial, but its course has been as erratic and fitful as the nation's overall committments to racial justice and equal opportunity."[83] While the conceptualization of race moved from the biological to sociological sphere over time, racism continues to be a factor producing adverse outcomes for African American and other ethnic minorities, as demonstrated in the Schulman et al. study.[1]

Racism in medicine and health care has paralleled racism in society. The nation's health delivery system has been distorted by race and class problems from its beginnings. Established on the basis of racial segrega-

tion, elitism, and class exclusivity, the American health delivery system was, thus, very stratified and unequal.

Race and class-based structuring of the U.S. health delivery system has combined with other factors, including physicians' attitudes–perhaps legacies conditioned by their participation in slavery and creation of the scientific myth of black biological and intellectual inferiority–to create a medical-social, health system cultural, and health delivery environment which contributes to the propagation of racial health disparities, and, ultimately, the health system's race and class dilemma. Will the health system fall prey to what opinion researchers' call white racial resentment and/or belief in principle/policy-implementation disconnect–possibly the latest manifestations of America's anti-black racism?[84] These attitudes and beliefs may be driving U.S. society's cynical, harsh, intolerant, some consider unrealistic and socially irresponsible demands that African Americans–still being victimized by discrimination, institutional racism, and some forms of apartheid–overcome the effects of 246 years of chattel slavery (64.4% of the African-American social experience), 100 years of legal segregation, discrimination, and brutal subjugation (26.18% of the African American social experience), in less than 35 years (9.42% of the African-American social experience) (Table 1). Until persistent institutional racism and racial discrimination in health policy, medical and health professions education, and health delivery are eradicated–all of which play significant roles in access, availability, and quality of care–African Americans will continue to experience poor health status and outcomes. Creation of a health policy institute dedicated to the study, assessment, and monitoring of the health of African American and other disadvantaged populations along with the design and implementation of programs for the production of a culturally competent healthcare workforce represent realistic and significant first steps for attacking the problem. Logic dictates the broader the dissemination of the message regarding the relationship between race, medicine, and health care in the U.S. and the adverse outcomes it produces, the more likely health reform will follow a wholesome, fair, and equitable course inclusive of all Americans.

ACKNOWLEDGMENTS

We thank. Ricardo Guthrie, senior editor, University of California at San Diego, for editorial assistance and Kevin Ohe and Routledge Publishers for permission to publish excerpts and material from Routledge publications.

REFERENCES

1. Schulman KA, Berlin JA, Harless W, Kerner JF, Sistrunk SS, Gersh BJ, et al. The effect of race and sex on physician recommendations for cardiac catheterization. *N Engl J Med.* 1999;340:618–626.

2. Clayton LA, Byrd WM. 1999. Race, a major health status and outcome variable, 1980–1999: with some historical perspectives. *J Natl Med Assoc.* 2001;93(suppl 1):35S–54S.

3. Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

Clayton LA, Byrd WM. Race, a major health status and outcome variable, 1980–1999. *J Natl Med Assoc.* 2001;93:(suppl 1):35S–54S.

4. Byrd WM. Race, biology, and health care: Reassessing a relationship. *J Health Care Poor Underserved.* 1990;1:278–292.

Byrd WM, Clayton LA. An American health dilemma: A history of blacks in the health system. *J Natl Med Assoc.*1992;84:189–200.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

Malone TE, Johnson KW. *Report of the Secretary's Task Force on Black and Minority Health.* Washington, DC: U.S. Department of Health and Human Services, 1986.

Kong D, Study: minorities' health lags. *The Boston Globe,* Thursday, April 23, 1992:1.

Komaromy M, Grumbach K, Drake M. The role of Black and Hispanic physicians in providing health care for underserved populations. *N Engl J Med.*1996;334:1305–1314.

Foster HW. Reaching parity for minority medical students: A possibility or a pipe dream? *J Natl Med Assoc.* 1996;88:17–21.

Shea S, Fullilove MT. Entry of black and other minority students in US medical schools: Historical perspectives and recent trends. *N Engl J Med* 1985;313:933–940.

O'Bannon LC. Are African-American doctors being locked out? The down side of managed care. *NMA* 1995;4:1.

Byrd WM. Inquisition, peer review, and black physician survival. *J Natl Med Assoc.* 1987;79:1027–1029.

Byrd WM, Clayton LA, Kinchen K, Richardson D, Lawrence L, Butcher R, et al. African-American physicians' views on health reform: preliminary results of a survey. *J Natl Med Assoc.* 1994;86:93–94.

Byrd WM, Clayton LA, Kinchen K, Richardson D, Lawrence L, Butcher R, et al. African-American physicians' views on health reform: results of a survey. *J Natl Med Assoc.* 1994;86:191–199.

Lavizzo-Mourey R, Clayton LA, Byrd WM, Johnson III G, Richardson D. The perceptions of African-American physicians concerning their treatment by managed care organizations. *J Natl Med Assoc.* 1996;88:210214.

Escarce JJ, Epstein KR, Colby DC, Schwartz JS. Racial differences in the elderly's use of medical procedures and diagnostic tests. *Am J Public Health* 1993;83:948-954.

Richardson L. White patients more likely to use AIDS drugs, study says. *The New York Times.* Sunday, July 27, 1997:24.

Wenneker MB, Epstein AM. Racial inequalities in the use of procedures for patients with ischemic health disease in Massachusetts. *JAMA.* 1990;263:2344–2346.

Blustein J, Weitzman BC. Access to hospitals with high-technology cardiac services: how is race important? *Am J Public Health.* 1995;85: 345–351.

Carlisle DM, Leake B, Shapiro MF. Racial and ethnic differences in the use of invasive cardiac procedures among cardiac patients in Los Angeles County, 1986 through 1988. *Am J Public Health.* 1995;85: 352–356.

Braveman P, Egerter S, Edmonston F, Verdon M. Racial/ethnic differences in the likelihood of caesarean delivery. *Am J Public Health.* 1995;85:625–630.

Krieger N. Analyzing socioeconomic and racial/ethnic patterns in health and health care. *Am J Public Health.* 1993;83:1086–1087.

Breast cancer deaths decrease–but not among black women. *The Nation's Health.* February, 1995:24.

Hester RD, Barber JB. Health reforms and the black community. *J Natl Med Assoc.* 1990;82:291–293.

5. Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

6. Van Sertima I. *They Came Before Columbus.* New York: Random House, 1976.

Bernal M. *Black Athena: The Afroasiatic Roots of Classical Civilization,* vols. 1 and 2. *The Fabrication of Ancient Greece 1785–1985* and *The Archaeological and Documentary Evidence.* New Brunswick, NJ: Rutgers University Press; 1987, 1991.

Finch CS. *The African Background to Medical Science: Essays in African History, Science and Civilizations.* London: Karnak House, 1990.

Finch CS. *Africa and the Birth of Science and Technology: A Brief Overview.* Decatur, Georgia: Khenti Publications, 1992.

Finch CS. *Echoes of the Old Darkland: Themes From the African Eden.* Decatur, Georgia: Khenti Publications, 1994.

Drake SC. *Black Folk Here and There: An Essay in History and Anthropology.* Two Volumes. Los Angeles: Center for Afro-American Studies, University of California, 1987, 1990.

7. Begley S, Chideya F, Wilson L. Out of Egypt, Greece: Seeking the roots of Western civilization on the banks of the Nile. *Newsweek.* 1991;118:49–50.

Asante MK. Putting Africa at the center. *Newsweek.* 1991;118:46.

Gates HL. Beware of the new pharaohs. *Newsweek.* 1991;118:47.

Lefkowitz M. *Not Out of Africa: How Afrocentrism Became an Excuse to Teach Myth as History.* New York: Basic Books; 1996.

Asante MK. Roots of the truth: Repelling attacks on Afrocentrism. *Emerge* 1996;7:66.

8. Van den Berghe PL. *Race and Racism: A Comparative Perspective.* New York: Wiley; 1967, 9.

9. Van den Berghe PL. *Race and Racism: A Comparative Perspective.* New York: Wiley; 1967:11.

10. Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

Stringer C, McKie R. *African Exodus: The Origins of Modern Humanity.* London: Jonathan Cape Ltd., 1996.

King JC. *The Biology of Race,* revised. Berkeley: University of California Press; 1981.

Reed J. Scientific Racism. In: Wilson CR, Ferris W, eds. *Encyclopedia of Southern Culture.* Chapel Hill: University of North Carolina Press; 1989:1358–1360.

Gossett TF. *Race: The History of an Idea in America.* Dallas, Texas: Southern Methodist University Press; 196.

Stanton W. *The Leopard's Spots: Scientific Attitudes Toward Race in America, 1815-1859.* Chicago: University of Chicago Press; 1960.

Haller Jr. JS. *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority, 1859-1900.* New York: McGraw Hill; 1971.

Tucker WH. *The Science and Politics of Racial Research.* Urbana, Illinois: University of Illinois Press; 1994.

Byrd WM. Race, biology, and health care: Reassessing a relationship. *J Health Care Poor Underserved* 1990;1:278–292.

Chase A. *The Legacy of Malthus: The Social Costs of the New Scientific Racism.* New York: Knopf; 1980.

Van den Berghe PL. *Race and Racism: A Comparative Perspective.* New York: Wiley; 1967.

Reilly K. *The West and the World: A Topical History of Civilization.* New York: Harper and Row;1980.

Terry RW. *For Whites Only.* Grand Rapids, Michigan: William B. Eerdmans; 1970.

Milner R. *The Encyclopedia of Evolution: Humanity's Search for its Origins.* New York: Facts on File, Inc.; 1990.

Shipman P. *The Evolution of Racism: Human Differences and the Use and Abuse of Science.* New York: Simon and Schuster; 1994.

Banton M, Harwood J. *The Race Concept.* New York: Praege Publishers; 1975.

Banton M. *Racial Theories.* Cambridge: Cambridge University Press; 1987.

Hubbard R, Wald E. *Exploding the Gene Myth: How Genetic Information Is Produced and Manipulated by Scientists, Physicians, Employers, Insurance Companies, Educators, and Law Enforcers.* Boston: Beacon Press; 1993.

11. Kovel J. *White Racism: A Psychohistory.* New York: Random House, 1970; xi.

12. Van den Berghe PL. *Race and Racism: A Comparative Perspective.* New York: Wiley; 1967

Terry RW. *For Whites Only.* Grand Rapids, Michigan: William B. Eerdmans, 1970.

Kovel J. *White Racism: A Psychohistory.* New York: Random House, 1970. New York: Columbia University Press; 1984.

Reilly K. *The West and the World: A Topical History of Civilization.* New York: Harper and Row; 1980.

Cose E. *Color-Blind: Seeing Beyond Race in a Race-Obsessed World.* New York: Harper-Collins Publishers; 1997.

Kozol J. *Savage Inequalities: Children in America's Schools.* New York: Crown Publishers, Inc., 1991.

Wilson WJ. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy.* Chicago: University of Chicago Press; 1987.

Wilson WJ. *When Work Disappears: The World of the New Urban Poor.* New York: Alfred A. Knopf, 1996.

Glasgow DG. *The Black Underclass: Poverty, Unemployment, and Entrapment of Ghetto Youth.* London: Jossey-Bass Limited; 1980.

Feagin JR, Spikes MP. *Living With Racism: The Black Middle-Class Experience.* Boston: Beacon Press; 1994.

Massey DS, Denton NA. *American Apartheid: Segregation and the Making of the Underclass.* Cambridge, MA: Harvard University Press; 1993.

Hacker A. *Two Nations: Black and White, Separate, Hostile, Unequal.* New York: Ballantine Books; 1992.

Kaiske BL, Neylan JF, Riggko RR, Danovitch GM, Kahana L, et al. The effect of race on access and outcome in transplantation. *N Engl J Med.* 1991; 324:302–307.

Norris GMK. Disparities for minorities in transplantation: the challenge to critical care nurses. *Heart and Lung.* 1991;20:419–420.

Carlisle DM, Leake B, Shapiro MF. Racial and ethnic differences in the use of invasive cardiac procedures among cardiac patients in Los Angeles County, 1986 through 1988. *Am J Public Health.* 1995; 85:352–356.

Wenneker MB, Epstein AM. Racial inequalities in the use of procedures for patients with ischemic health disease in Massachusetts. *JAMA.* 1989; 261:253–257.

13. Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

Montagu A. *Race, Science and Humanity.* New York: Van Nostrand Reinhold Co.; 1963.

Lewis B. *Race and Slavery in the Middle East: An Historical Enquiry.* New York: Oxford University Press; 1990.

Drake SC. *Black Folk Here and There: An Essay in History and Anthropology,* vol. 2. Los Angeles: Center for Afro-American Studies, University of California, 1990.

14. Byrd WM. Race, biology, and health care: Reassessing a relationship. *J Health Care Poor Underserved.* 1990;1:278–292.

Byrd WM, Clayton LA. An American health dilemma: A history of blacks in the health system. *J Natl Med Assoc.* 1992; 84:189–200.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

15. De Tocqueville A. *Democracy in America,* vol. 2. Mayer JP, ed. Lawrence G, trans. New York: Harper Perennial; 1958:530.

16. Higginbotham AL, Jr. *In the Matter of Color: Race and the American Legal Process, The Colonial Period.* New York: Oxford University Press; 1978: 54, 121, 198, 211, 243.

Byrd WM, Clayton LA. An American health dilemma: a history of blacks in the health system. *J Natl Med Assoc.* 1992;84:189–200.

Byrd WM, Clayton LA. The "slave health deficit:" racism and health outcomes. *Health/PAC Bulletin.* 1991; 21:25–28.

Thomas H. *The Slave Trade: The Story of the Atlantic Slave Trade: 1440–1870.* New York: Simon and Schuster; 1997.

17. Milner R. *The Encyclopedia of Evolution: Humanity's Search for Its Origins.* New York: Facts on File; 1990:201.

18. Davis DB. *Slavery and Human Progress.* New York: Oxford University Press; 1984:3, 23, 25.

Wasserman HP. *Ethnic Pigmentation: Historical, Psychological, and Clinical Aspects.* New York: Elsevier;1974:17–18.

Gossett TF. *Race: The History of an Idea in America.* Dallas, Texas: Southern Methodist University Press; 1963:6.

Goldberg DT. The social formation of racist discourse. In: Goldberg DT, ed. *Anatomy of Racism.* Minneapolis: University of Minnesota Press; 1990:295–318.

Harris JE. *Africans and Their History, revised.* New York: New American Library; 1972.

19. Wasserman HP. *Ethnic Pigmentation: Historical, Psychological, and Clinical Aspects.* New York: American Elsevier Publishing Company, 1974, 17–19.

Gossett TF. *Race: The History of an Idea in America.* Dallas, TX: Southern Methodist University Press; 1963:5–7.

Bernal M. *Black Athena: The Afroasiatic Roots of Classical Civilization, vol. 1. The Fabrication of Ancient Greece 1785–1985.* New Brunswick, NJ: Rutgers University Press; 1987:28, 202, 212.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

20. Drake S. *Black Folk Here and There: An Essay in History and Anthropology.* Los Angeles: Center for Afro-American Studies, University of California, 1987, 1990.

Goldberg DT. The social formation of racist discourse. In: Goldberg DT, ed. *Anatomy of Racism.* Minneapolis: University of Minnesota Press; 1990:295–318.

Milner R. *The Encyclopedia of Evolution: Humanity's Search for Its Origins.* New York: Facts on File, Inc.; 1990: 201.

Jordan WD. *White and Black: American Attitudes Toward the Negro, 1550-1812.* New York: WW Norton, 1968.

Harris JE. *Africans and Their History,* revised. New York: New American Library; 1972.

Wasserman HP. *Ethnic Pigmentation: Historical, Psychological, and Clinical Aspects.* New York: Elsevier; 1974.

21.Finley MI. *Ancient Slavery and Modern Ideology.* New York: Viking Penguin Inc., 1980:105–106.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

22. Gould SJ. Bound by the great chain. 281–291. In: Gould SJ. *The Flamingo's Smile: Reflections in Natural History.* New York: WW Norton; 1985.

Goldberg T. The social formation of racist discourse. 295-318. In: Goldberg DT, ed. *Anatomy of Racism.* Minneapolis: University of Minnesota Press; 1990.

Lovejoy AO. *The Great Chain of Being: A Study of the History of an Idea.* Cambridge, MA: Harvard University Press; 1936.

Davis DB. *The Problem of Slavery in Western Culture.* Ithaca: Cornell University Press; 1966:66–90.

Davis DB. *Slavery and Human Progress.* New York: Oxford University Press; 1984.

Wassermann HP. *Ethnic Pigmentation: Historical, Psychological, and Clinical Aspects.* New York: Elsevier; 1974:17–19.

Patterson O. *Slavery and Social Death: A Comparative Study.* Cambridge, MA: Harvard University Press; 1982:86–94.

Bernal M. *Black Athena: The Afroasiatic Roots of Classical Civilization, vol.1. The Fabrication of Ancient Greece 1785–1985.* New Brunswick, NJ: Rutgers University Press;1987:28, 202, 212.

Finley MI. *Ancient Slavery and Modern Ideology.* New York: Viking Penguin Inc.; 1980:118–119.

Sanders R. *Lost Tribes and Promised Lands: The Origins of American Racism.* Boston: Little, Brown and Co.; 1978.

Devisse J. *The Image of the Black in Western Art. Part II. From the Early Christian Era to the "Age of Discovery."* 1. *From the Demonic Threat to the Incarnation of Sainthood.* Cambridge, MA: The Menil Foundation; 1979.

Drake S. *Black Folk Here and There: An Essay in History and Anthropology,* vol. 2. Los Angeles: Center for Afro-American Studies, University of California; 1990:45.

Bynum WF, Browne EJ, Porter R, eds. *The Dictionary of the History of Science.* New York: Macmillan Press; 1981.

23. Lewis B. The African diaspora and the civilization of Islam. In: Kilson ML, Rothberg RI, eds. *The African Diaspora: Interpretive Essays.* Cambridge, MA: Harvard University Press; 1976:37–56, 49.

Devisse J. *The Image of the Black in Western Art. Part II. From the Early Christian Era to the "Age of Discovery."* 1. *From the Demonic Threat to the Incarnation of Sainthood.* Cambridge, MA: The Menil Foundation;1979:50–57, 52.

24. Lewis B. *Race and Slavery in the Middle East: An Historical Inquiry.* New York: Oxford University Press; 1990.

Davis DB. *Slavery and Human Progress.* New York: Oxford University Press; 1984.

Sanders R. *Lost Tribes and Promised Lands: The Origins of American Racism.* Boston: Little, Brown and Company; 1978.

Davis DB. *The Problem of Slavery in Western Culture.* Ithaca, NY: Cornell University Press; 1966.

Lewis B. The African diaspora and the civilization of Islam. In: Kilson ML, Rothberg RI, eds. *The African Diaspora: Interpretive Essays.* Cambridge, MA: Harvard University Press; 1976:37–56.

25. Sirasi NG. *Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice.* Chicago: University of Chicago Press; 1990.

Lyons AS, Petrucelli RJ. *Medicine: An Illustrated History.* New York: Harry N. Abrams, Inc., 1978.

Bender GA. *Great Moments in Medicine.* Detroit: Northwood Institute Press; 1966.

Majno G. *The Healing Hand: Man and Wound in the Ancient World.* Cambridge, MA: Harvard University Press; 1975.

26. Stannard DE. *American Holocaust: Columbus and the Conquest of the New World.* New York: Oxford University Press; 1992: 209.

27. Lyons AS, Petrucelli RJ. *Medicine: An Illustrated History.* New York: Harry N. Abrams, Inc.; 1978.

Nuland SB. *Doctors: The Biography of Medicine.* New York: Alfred A. Knopf, 1988.

Meadows J. *The Great Scientists.* New York: Oxford University Press; 1987.

Luce HR. *Life's Picture History of Western Man.* New York: Time Inc., 1951.

Boorstin DJ. *The Discoverers.* New York: Random House, Inc.; 1983.

Byrd WM. Race, biology, and health care: reassessing a relationship. *J Health Care Poor Underserved.* 1990;1:278–292.

Byrd WM, Clayton LA. The "slave health deficit:" racism and health outcomes. *Health/PAC Bulletin.* 1991;21:25–28.

28. Byrd WM. Race, biology, and health care: reassessing a relationship. *J Health Care Poor Underserved.* 1990;1:278–292.

Luce HR. *Life's Picture History of Western Man.* New York; Time Inc.; 1951.

Roberts J. *The Triumph of the West.* Boston: Little, Brown; 1985.

29. Shyrock RH. *The Development of Modern Medicine: An Interpretation of the Social and Scientific Factors Involved.* Madison, WI: University of Wisconsin Press; 1974:3–16.

Guthrie D. *A History of Medicine.* Philadelphia: Lippincott; 1946:134–175.

Ackerknecht EH. *A Short History of Medicine,* revised. Baltimore: Johns Hopkins University Press; 1982:94–127.

Boorstin DJ. The equality of the human species. In: Boorstin DJ. *Hidden History: Exploring Our Secret Past.* New York: Harper and Row; 1987:111–123.

Davis DB. *The Problem of Slavery in Western Culture.* Ithaca, NY: Cornell Unviersity Press; 1966:454.

Wasserman HP. *Ethnic Pigmentation: Historical, Psychological, and Clinical Aspects.* New York: Elsevier; 1974:27, 35, 39.

Jordan WD. *White Over Black: American Attitudes Toward the Negro, 1550–1812.* New York: WW Norton and Co.;1968:246.

Byrd WM. Race, biology and health care: reassessing a relationship. *J Health Care Poor Underserved.* 1990;1:278–292.

Gossett TF. *Race: The History of an Idea in America.* Dallas, TX: Southern Methodist University Press; 1963.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

30. Jordan WD. *White Over Black: American Attitudes Toward the Negro, 1550–1812.* New York: WW Norton and Co.;1968:216-263, 230, 236, 483–511.

Smith SS; Jordan WD, ed. *An Essay on the Causes of the Variety of Complexion and Figure in the Human Species.* Cambridge, MA: Belknap Press of Harvard University Press; 1965.

Boorstin DJ. The equality of the human species. 111-123. In: Boorstin DJ. *Hidden History: Exploring our Secret Past.* New York: Harper and Row Publishers. Inc., 1987.

Drake SC. *Black Folk Here and There: An Essay in History and Anthropology, vol. 1.* Los Angeles: Center for Afro-American Studies, University of California, 1987.

Honour H. *The Image of the Black in Western Art. Part IV. From the American Revolution to World War I. 2. Black Models and White Myths.* Cambridge: Menil Foundation, Inc.;1989.

Byrd WM, Clayton LA. Meharry Medical Archive-NMA Slide Collection. Nashville and Boston: Meharry Medical Library, Countway Medical Library of Harvard Medical School, 1991–1999.

Haller JS. *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority, 1859–1900.* Urbana: University of Illinois Press; 1971:1–14.

Magnusson M, ed. *Cambridge Biographical Dictionary.* Cambridge: Cambridge University Press; 1990:225–226, 900.

Marshall PJ, Williams G. *The Great Map of Mankind: Perceptions of New Worlds in the Age of Enlightenment.* Cambridge, MA: Harvard University Press; 1982:245.

Davis DB. *The Problem of Slavery in Western Culture.* Ithaca: Cornell University Press; 1966:454–455.

Honour H. *The Image of the Black in Western Art. Part IV. From the American Revolution to World War I. 2. Black Models and White Myths.* Cambridge: Menil Foundation, Inc.;1989:13–14.

Cohen IB. *Album of Science: From Leonardo to Lavoisier, 1450-1800.* New York: Scribners; 1980:228.

Gould SJ. *The Mismeasure of Man.* New York: W.W. Norton; 1981:35.

Stanton W. *The Leopard's Spots: Scientific Attitudes Toward Race in America, 1815–1859.* Chicago: University of Chicago Press; 1960.

Muir H, ed. *Larousse Dictionary of Scientists.* New York: Larousse; 1994:83, 321.

31. Morais HM. *The History of the Negro in Medicine.* New York: Publishers Company, Inc.; 1967.

Savitt TL. *Medicine and Slavery: The Diseases and Health Care of Blacks in Antebellum Virginia.* Urbana: University of Illinois Press; 1987.

Postell WD. *The Health of Slaves on Southern Plantations.* Gloucester, MA: Louisiana State University Press; 195.

Sheridan RB. *Doctors and Slaves: A Medical and Demographic History of Slavery in the British West Indies, 1680–1834.* Cambridge: Cambridge University Press; 1985.

Horsman R. *Josiah Nott of Mobile: Southerner, Physician, and Racial Theorist.* Baton Rouge: Louisiana State University Press; 1987.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

32. Curry LP. *The Free Black in Urban America, 1800-1850: The Shadow of the Dream.* Chicago: University of Chicago Press; 1981.

Savitt TL. *Medicine and Slavery: The Diseases and Health Care of Blacks in Antebellum Virginia.* Urbana: University of Illinois Press; 1987.

Byrd WM, Clayton LA. An American health dilemma: a history of blacks in the health system. *J Natl Med Assoc.* 1992;84:189–200.

Wade RC. *Slavery in the Cities: The South 1820–1860.* London: Oxford University Press; 1964.

Byrd WM, McHollin M. Tennessee Black Medical Heritage Tour. A report prepared for the Tennessee Humanities Council for the 1990 Black Medical Heritage Tour, Meharry Medical College Black Medical History Archive, Meharry Medical College, Nashville, TN, 1991.

33. Reed J. Scientific racism. In: Wilson CR, Ferris W, eds. *Encyclopedia of Southern Culture.* Chapel Hill: University of North Carolina Press; 1989:1358–1360.

Boorstin DJ. The equality of the human species. 111-123. In: Boorstin DJ. *Hidden History: Exploring Our Secret Past.* New York: Harper and Row; 1987.

Smith SS, Jordan WD, ed. *An Essay on the Causes of the Variety of complexion and Figure in the Human Species.* Cambridge, MA: Belknap Press of Harvard University Press; 1965.

Burke J. Fit to rule. In: *The Day the Universe Changed.* Boston: Little, Brown and Co.; 1985:239–273.

Drake SC. *Black Folk Here and There: An Essay in History and Anthropology, vol. 1.* Los Angeles: Center for Afro-American Studies, University of California; 1987:23–30.

Stanton W. *The Leopard's Spots: Scientific Attitudes Toward Race in America, 1815–1859.* Chicago: University of Chicago Press; 1960.

Haller Jr. JS. *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority, 1859-1900.* New York: McGraw Hill;1971.

Horsman R. *Josiah Nott of Mobile: Southerner, Physician, and Racial Theorist.* Baton Rouge: Louisiana State University Press; 1987.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

34. Duffy J. States' Rights Medicine. In: Wilson CR, W Ferris, eds. *Encyclopedia of Southern Culture.* Chapel Hill: University of North Carolina Press; 1989:1355–1356.

Jones JH. *Bad Blood: The Tuskegee Syphilis Experiment.* New York: The Free Press; 1981.

Beardsley EH. *A History of Neglect: Health Care for Blacks and Mill Workers in the Twentieth-Century South.* Knoxville: University of Tennessee Press; 1987.

Byrd WM, Clayton LA. The "slave health deficit:" racism and health outcomes. *Health/PAC Bulletin.* 1991;21:25-28;

Byrd WM, Clayton LA. *A Black Health Trilogy* [videotape and 188 page documentary report]. Washington, DC: The National Medical Association and the African American Heritage and Education Foundation; 1991.

Byrd WM, Clayton LA. An American health dilemma: a history of blacks in the health system. *J Natl Med Assoc.* 1992; 84:189–200.

35. Savitt TL. *Medicine and Slavery: The Diseases and Health Care of Blacks in Antebellum Virginia.* Urbana: University of Illinois Press; 1987.

Byrd WM, Clayton LA. *A Black Health Trilogy* [videotape and 188-page documentary report]. Washington, DC: The National Medical

Association and the African American Heritage and Education Foundation; 1991.

Byrd WM, Clayton LA. The "slave health deficit:" racism and health outcomes. *Health/PAC Bulletin.* 1991;21:25-28.

36. Morais HM. *The History of the Negro in Medicine.* Under auspices of The Association for the Study of Negro Life and History. New York: Publishers Co.; 1967:154;

Duffy J. States' Rights Medicine. In: Wilson CR, W Ferris, eds. *Encyclopedia of Southern Culture.* Chapel Hill: University of North Carolina Press; 1989:1355-1356.

Byrd WM. *Documentary Report: Negro Diseases and Physiological Peculiarities.* Nashville: Cancer Control Research Unit, Meharry Medical College, July 12, 1990. In: Byrd WM, Clayton LA. *A Black Health Trilogy* [videotape and 188 page documentary report]. Washington, DC: The National Medical Association and the African American Heritage and Education Foundation; 1991. Revised Edition. Washington, DC: The National Medical Association, 1994.

37. Byrd WM, Clayton LA. The "slave health deficit:" racism and health outcomes. *Health/PAC Bulletin.* 1991;21:25-28;

Shryrock RH. Medical practice in the Old South. In: Shryrock RH. *Medicine in America: Historical Essays.* Baltimore: Johns Hopkins Press; 1966:49-70.

Savitt T. Black health on the plantation: masters, slaves, and physicians. In: Leavitt JW, Numbers RL, eds. *Sickness and Health in America: Readings in the History of Medicine and Public Health.* Madison, WI: University of Wisconsin Press; 1985:313-330.

Savitt TL. Black Health on the Plantation: Masters, Slaves, and Physicians. In: Numbers RL, Savitt TL, eds. *Science and Medicine in the Old South.* Baton Rouge: Louisiana State University Press; 1989:327-355.

38. Morais HM. *The History of the Negro in Medicine.* Under auspices of The Association for the Study of Negro Life and History. New York: Publishers Company, Inc.; 1967.

Ewbank DC. History of Black mortality and health before 1940. 100-128. In: Willis DP, ed. *Health Policies and Black Americans.* New Brunswick, NJ: Transaction Publishers, 1989.

Farley R. *Growth of the Black Population: A Study of Demographic Trends.* Chicago: Markham Publishing Co.; 1970:1-40.

Farley R, Allen WR. *The Color Line and the Quality of Life in America.* New York: Oxford University Press; 1989:1-31.

Byrd WM, Clayton LA. The "slave health deficit:" racism and health outcomes. *Health/PAC Bulletin.* 1991;21:25-28;

Postell WD. *The Health of Slaves on Southern Plantations.* Gloucester, MA: Louisiana State University Press; 1951.

Duffy J. States' rights medicine. In: Wilson CR, W Ferris, eds. *Encyclopedia of Southern Culture.* Chapel Hill: University of North Carolina Press; 1989:1355-1356.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

39. Savitt TL. The use of blacks for medical experimentation and demonstration in the old south. *J Southern History.* 1982;48:331-348.

Curry LP. *The Free Black in Urban America, 1800-1850:* The Shadow of the Dream. Chicago: University of Chicago Press; 1981.

Savitt TL. *Medicine and Slavery: The Diseases and Health Care of Blacks in Antebellum Virginia.* Urbana: University of Illinois Press; 1987.

Postell WD. *The Health of Slaves on Southern Plantations.* Gloucester, MA: Louisiana State University Press; 1951.

Morais HM. *The History of the Negro in Medicine.* Under auspices of The Association for the Study of Negro Life and History. New York: Publishers Company, Inc., 1967.

Ewbank DC. History of Black mortality and health before 1940. In: Willis DP, ed. *Health Policies and Black Americans.* New Brunswick, NJ: Transaction Publishers, 1989:100-128.

40. Rosenberg CE. *The Care of Strangers: The Rise of America's Hospital System.* New York: Basic Books, Inc.;1987: 40, 178, 301-303.

Dowling HF. *City Hospitals: The Undercare of the Underprivileged.* Cambridge, MA: Harvard University Press; 1982:12.

Curry LP. *The Free Black in Urban America, 1800-1850: The Shadow of the Dream.* Chicago: University of Chicago Press; 1981:136-146;

Savitt TL. The use of blacks for medical experimentation and demonstration in the old south. *J Southern History.* 1982; 48:331-348.

41. Curry LP. *The Free Black in Urban America, 1800-1850: The Shadow of the Dream.* Chicago: University of Chicago Press; 1981.

Rosenberg CE. *The Care of Strangers: The Rise of America's Hospital System.* New York: Basic Books; 1987.

Dowling HF. *City Hospitals: The Undercare of the Underprivileged.* Cambridge, MA: Harvard University Press; 1982.

42. Rosenberg CE. *The Care of Strangers: The Rise of America's Hospital System.* New York: Basic Books; 1987.

Vogel MJ. *The Invention of the Modern Hospital: Boston 1870-1930.* Chicago: University of Chicago Press; 1980.

Novotny A, Smith C. eds. *Images of Healing: A Portfolio of American Medical and Pharmaceutical Practice in the 18th, 19th, and early 20th Centuries.* New York: Macmillan; 1980.

43. Morais HM. *The History of the Negro in Medicine.* Under auspices of The Association for the Study of Negro Life and History. New York: Publishers Company, Inc.; 1967.

Gamble VN. Hospitals, Black. 1305-1309. In: Salzman J, Smith DL, West C. eds. *Encyclopedia of African-American Culture and History.* New York: Macmillan Library; 1996.

Byrd WM, Clayton LA. An American health dilemma: a history of blacks in the health system. *J Natl Med Assoc* 1992;84:189-200.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

Curry LP. *The Free Black in Urban America, 1800-1850: The Shadow of the Dream.* Chicago: University of Chicago Press; 1981:136-146.

Rosenberg CE. *The Care of Strangers: The Rise of America's Hospital System.* New York: Basic Books; 1987.

Cobb WM. The black American in medicine. *J Natl Med Assoc.* 1981;73(suppl 1):1183-1244.

Savitt TL. The use of blacks for medical experimentation and demonstration in the old south. *J Southern History.* 1982;48:331-348.

44. Starr P. *The Social Transformation of American Medicine.* New York: Basic Books, Inc., 1982.

Byrd WM, Clayton LA. An American health dilemma: a history of blacks in the health system. *J Natl Med Assoc.* 1992;84:189-200.

Byrd WM. Medical associations. In: Salzman J, Smith DL, West C. eds. *Encyclopedia of African-American Culture and History.* New York: Macmillan Library Reference USA;1996:1747-1749.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

Curtis JL. *Blacks, Medical Schools, and Society.* Ann Arbor: University of Michigan Press; 1971.

Takaki RY. *Iron Cages: Race and Culture in Nineteenth-Century America.* New York: Alfred A. Knopf; 1979.

Contee CG. John Sweat Rock, MD, Esq., 1825-1866. *J Natl Med Assoc.* 1976;68:237-242.

45. Jones JH. *Bad Blood: The Tuskegee Syphilis Experiment.* New York: The Free Press; 1981.

Reed J. Scientific racism. 1358-1360. In Wilson CR, Ferris W, eds. *Encyclopedia of Southern Culture.* Chapel Hill: University of North Carolina Press; 1989:L1358-1360.

Stanton W. *The Leopard's Spots: Scientific Attitudes Toward Race in America, 1815-1859.* Chicago: University of Chicago Press; 1960.

Fredrickson GM. *The Black Image in the White Mind: The Debate on Afro-American Character and Destiny, 1871-1914.* New York: Harper and Row; 1971.

Haller Jr. JS. *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority, 1859-1900.* New York: McGraw Hill Book Company, 1971.

46. Jones JH. *Bad Blood: The Tuskegee Syphilis Experiment.* New York: The Free Press; 1981.

Reed J. Scientific racism In: Wilson CR, Ferris W, eds. *Encyclopedia of Southern Culture.* Chapel Hill: University of North Carolina Press; 1989:1358–1360.

Stanton W. *The Leopard's Spots: Scientific Attitudes Toward Race in America, 1815–1859.* Chicago: University of Chicago Press; 1960.

Haller Jr. JS. *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority, 1859–1900.* New York: McGraw Hill Book Company, 1971.

Shryock RH. *Medicine in America: Historical Essays.* Baltimore: The Johns Hopkins Press; 1966.

Haller Jr. JS, Haller RM. *The Physician and Sexuality in Victorian America.* Urbana: University of Illinois Press; 1974.

47. Epps HR. The Howard University medical department in the Flexner era: 1910-1929. *J Natl Med Assoc.* 1989;81:885.

Hunt S. The Flexner report and black academic medicine: an assignment of place. *J Natl Med Assoc* 1993;85:151–155.

Savitt TL. Abraham Flexner and the black medical schools. In: Barzansky EM, Gevitz N, eds. *Beyond Flexner: Medical Education in the 20th Century.* New York: Greenwood Press; 1992:65–81.

Savitt TL. A journal of our own: *The Medical and Surgical Observer* at the beginnings of an African-American medical profession in late 19th-century America. *J Natl Med Assoc.* 1996;88:52-60, 115–122.

Williamson J. *The Crucible of Race: Black-White Relations in the American South Since Emancipation.* New York: Oxford University Press; 1984.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

48. Cobb WM. *The First Negro Medical Society: A History of the Medical-Chiurgical Society of the District of Columbia.* Washington, DC: The Associated Publishers; 1939.

49. Morais HM. *The History of the Negro in Medicine.* Under auspices of The Association for the Study of Negro Life and History. New York: Publishers Company, Inc., 1967.

Jones JH. Tuskegee syphilis experiment. 2685-2687. In: Salzman J, Smith DL, West C. eds. *Encyclopedia of African-American Culture and History.* New York: Macmillan 1996:2685–2687.

Reed J. Scientific Racism. In: Wilson CR, Ferris W, eds. *Encyclopedia of Southern Culture.* Chapel Hill: University of North Carolina Press; 1989:1358–1360.

50. Morais HM. *The History of the Negro in Medicine.* Under auspices of The Association for the Study of Negro Life and History. New York: Publishers Company, Inc., 1967.

Cobb WM. The black American in medicine. *J Natl Med Assoc.* 1981;73(suppl 1):1183–1244.

Byrd WM, Clayton LA. An American health dilemma: a history of blacks in the health system. *J Natl Med Assoc.* 1992;84:189–200.

Reynolds PP. Hospitals and Civil Rights, 1945-1963: *Simkins v. Moses H. Cone Memorial Hospital. Annals Intern Med.* 1997;126:898–906.

Reynolds PP. The federal government's use of Title VI and Medicare to racially integrate hospitals in the United States, 1963 through 1967. *Am J Public Health.* 1997;87:1850–1858.

51. Du Bois WEB. Mortality among Negroes in cities. *Proceeding of the Conference for Investigation of City Problems.* Atlanta: Atlanta University Publications; 1896.

DuBois WEB. *Social and physical conditions of Negroes in cities. Proceedings of the Second Conference for the Negro City Life.* Atlanta: Atlanta University Publications; 1897.

DuBois WEB. *The Health and Physique of the Negro American.* A Social Study Made under the Direction of the Eleventh Atlanta Conference for the Study of the Negro Problems held atr Atlanta University, May 29, 1906. Atlanta: Atlanta University Publications, 1906.

Ewbank DC. History of Black mortality and health before 1940. 100–128. In: Willis DP, ed. *Health Policies and Black Americans.* New Brunswick, NJ: Transaction Publishers, 1989:100–128.

Farley R. Growth of the Black Population: A Study of Demographic Trends. Chicago: Markham Publishing; 1970:1–75.

Farley R, Allen WR. *The Color Line and the Quality of Life in America.* New York: Oxford University Press; 1989:1–57.

Newman DK, Amidei NJ, Carter BL, Day D, Kruvant WJ, Russell JS. Second class medicine. In: *Protest, Politics, and Prosperity: Black Americans and White Institutions, 1940-1975.* New York: Pantheon Books; 1978:187–235.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

52. Rosenberg CE. *The Care of Strangers: The Rise of America's Hospital System.* New York: Basic Books, Inc., Publishers, 1987.

Starr P. *The Social Transformation of American Medicine.* New York: Basic Books, Inc., Publishers, 1982.

Stevens RA. *In Sickness and in Wealth: American Hospitals in the Twentieth Century.* New York: Basic Books, 1989. Baltimore: Johns Hopkins University Press; 1999.

53. Cobb WM. The black American in medicine. *J Natl Med Assoc.* 1981;73(suppl 1):1183–1244.

Morais HM. *The History of the Negro in Medicine.* Under auspices of The Association for the Study of Negro Life and History. New York: Publishers Company, Inc., 1967.

Bullough B, Bullough VL. *Poverty, Ethnic Identity, and Health Care.* New York: Appleton-Century-Crofts; 1972.

Newman DK, Amidei NJ, Carter BL, Day D, Kruvant WJ, Russell JS. Second class medicine. In: *Protest, Politics, and Prosperity: Black Americans and White Institutions, 1940–75.* New York: Pantheon Books, 1978:187–235.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

54. Summerville J. *Educating Black Doctors: A History of Meharry Medical College.* University of Alabama Press; 1983.

Ludmerer KM. *Learning to Heal: The Development of American Medical Education.* New York: Basic Books, Inc., Publishers, 1985.

Cobb WM. *Medical Care and the Plight of the Negro.* New York: The National Association for the Advancement of Colored People, 1947.

Cobb WM. *Progress and Portents for the Negro in Medicine.* New York: The National Association for the Advancement of Colored People, 1948.

Dowling HF. *City Hospitals: The Undercare of the Underprivileged.* Cambridge, MA: Harvard University Press;1982.

55. Rosenberg CE. *The Care of Strangers: The Rise of America's Hospital System.* New York: Basic Books, Inc.;1987.

Ludmerer KM. *Learning to Heal: The Development of American Medical Education.* New York: Basic Books, Inc.; 1985.

Dowling HF. *City Hospitals: The Undercare of the Underprivileged.* Cambridge, MA: Harvard University Press; 1982.

Rothstein WG. *American Medical Schools and the Practice of Medicine.* New York: Oxford University Press; 1987.

56. Morais HM. *The History of the Negro in Medicine.* Under auspices of The Association for the Study of Negro Life and History. New York: Publishers Company, Inc.; 1967.

Sidel VW, Sidel R, eds. *Reforming Medicine: Lessons of the Last Quarter Century.* New York: Pantheon Books, 1984.

Robert Wood Johnson Foundation. *Special Report no. 1, The Foundation's Minority Medical Training Programs, Minority Applicants to Medical School are Better Qualified Today than in Mid-70s, Yet Less Likely to be Accepted.* Princeton, NJ: Robert Wood Johnson Foundation; 1987.

57. Cobb WM. *The First Negro Medical Society: A History of the Medico-Chirurgical Society of the District of Columbia.* Washington, DC: The Associated Publishers, 1939.

Cobb WM. *Medical Care and the Plight of the Negro.* New York: The National Association for the Advancement of Colored People, 1947.

Cobb WM. *Progress and Portents for the Negro in Medicine.* New York: The National Association for the Advancement of Colored People, 1948.

Epps HR. The Howard University medical department in the Flexner era: 1910-1929. *J Natl Med Assoc.* 1989;81:885.

Summerville J. *Educating Black Doctors: A History of Meharry Medical College.* University of Alabama Press; 1983.

Hanft RS, Fishman LE, Evans W. *Blacks and the Health Professions in the 80s: A National Crisis and a Time for Action.* Association of Minority Health Professions Schools; 1983.

58. The American Anti-Slavery Society. *American Slavery As It Is: Testimony of a Thousand Witnesses. The Anti-Slavery Examiner,* 1839 (No. 6), New York: The American Anti-Slavery Society, 1839.

Savitt TL. The use of blacks for medical experimentation and demonstration in the old south. *J Southern History.* 1982;48:331–348.

Byrd WM, Clayton LA. *A Black Health Trilogy* [videotape and 188 page documentary report]. Washington, DC: The National Medical Association and the African American Heritage and Education Foundation; 1991.

Blakely RL, Harrington JM, eds. *Bones in the Basement: Postmortem Racism in Nineteenth-Century Medical Training.* Washington: Smithsonian Institution Press; 1997.

Jones JH. *Bad Blood: The Tuskegee Syphilis Experiment.* New York: The Free Press; 1981.

Walker HE. *The Negro in the Medical Profession.* Publications of the University of Virginia Phelps-Stokes Fellowship Papers. University of Virginia, 1949.

Kenney JA. Second annual oration on surgery. *J Natl Med Assoc.* 1941;33:203–214.

Lewis JH. Contribution of an unknown Negro to anesthesia. *J Natl Med Assoc.* 1931;23:23–24.

Shryock RH. *The Development of Modern Medicine: An Interpretation of the Social and Scientific Factors Involved.* Madison, WI: University of Wisconsin Press; 1974.

Bullough B, Bullough VL. *Poverty, Ethnic Identity, and Health Care.* New York: Appleton-Century-Crofts; 1972.

59. Jones JH. Tuskegee syphilis experiment. 2685-2687. In: Salzman J, Smith DL, West C. eds. *Encyclopedia of African-American Culture and History.* New York: Macmillan; 1996:2685–2687.

Morais HM. *The History of the Negro in Medicine.* Under auspices of The Association for the Study of Negro Life and History. New York: Publishers Company, Inc.; 1967.

Thomas SB, Quinn SC. Public health then and now: The Tuskegee syphilis study, 1932 to 1972: implications for HIV education and AIDS risk education programs in the black community. *Am J Public Health.* 1991;81:1498–1504.

60. Gamble VN. Under the shadow of Tuskegee: African Americans and health care. *Am J Public Health.* 1997;87:1773–1778.

Brandt AM. Racism and research: the case of the Tuskegee Syphilis Study. 331-343. In: Leavitt JW, Numbers RL, eds. *Sickness and Health in America: Readings in the History of Medicine and Public Health.* Madison, WI: University of Wisconsin Press; 1985:331–343.

Thomas SB, Quinn SC. Public health then and now: the Tuskegee syphilis study, 1932 to 1972: implications for HIV education and AIDS risk education programs in the black community. *Am J Public Health.* 1991;81:1498–1504.

Jones JH. *Bad Blood: The Tuskegee Syphilis Experiment.* New York: The Free Press; 1981.

61. Beardsley EH. *A History of Neglect: Health Care for Blacks and Mill Workers in the Twentieth Century South.* Knoxville: University of Tennessee Press; 1987.

Morais HM. *The History of the Negro in Medicine.* Under auspices of The Association for the Study of Negro Life and History. New York: Publishers Company, Inc.; 1967.

Gamble VN. The Negro hospital renaissance: the black hospital movement, 1920-1945. In: Long DE, Golden J, eds. *The American General Hospital: Communities and Social Contexts.* Ithaca: Cornell University Press; 1989:82–105.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

62. Du Bois WEB. Mortality among Negroes in cities. *Proceedings of the Conference for Investigation of City Problems.* Atlanta: Atlanta University Publications, 1896.

Du Bois WEB. *Social and Physical Conditions of Negroes in Cities. Proceedings of the Second Conference for the Negro City Life.* Atlanta: Atlanta University Publications, 1897.

Du Bois WEB. *The Health and Physique of the Negro American.* A Social Study Made under the Direction of the Eleventh Atlanta Conference for the Study of the Negro Problems, held at Atlanta University, May 29, 1906, Atlanta: Atlanta University Publications; 1906.

Poindexter H. Handicaps in the normal growth and development of rural Negro children. *Am J Public Health.* 1938;28:1049.

Cornely PB. Morbidity and mortality from scarlet fever in the Negro. *Am J Public Health.* 1939;29:999–1005.

Cornely PB. Observations on the health progress of Negroes in the U.S. during the past two decades. *South Med J.* 1941;34:1286.

Cornely PB. Trends in public health activities among Negroes in 96 Southern counties during the period 1930-1939. *Am J Public Health.* 1942;32:1117–1123.

Cornely PB. Distribution of Negro physicians in the United States in 1942. *JAMA.* 1944;124:826.

Haynes MA. Distribution of black physicians in the United States, 1967. *JAMA* 1969;210:93–95.

Haynes MA, McGarvey MR. Physicians, hospitals, and patients in the inner city. In: Norman JC, ed. *Medicine in the Ghetto.* New York: Appleton-Century-Crofts, 1969.

Haynes MA. The gap in health status between black and white Americans. In: Williams RA, ed. *Textbook of Black-Related Diseases.* New York: McGraw-Hill; 1975:1–30.

63. Bullough B, Bullough VL. *Poverty, Ethnic Identity, and Health Care.* New York: Appleton-Century-Crofts, 1972.

Newman DK, Amidei NJ, Carter BL, Day D, Kruvant WJ, Russell JS. Second class medicine. In: *Protest, Politics, and Prosperity: Black Americans and White Institutions, 1940–1975.* New York: Pantheon Books; 1978:187–235.

Sidel VW, Sidel R, eds. *Reforming Medicine: Lessons of the Last Quarter Century.* New York: Pantheon Books, 1984.

Cray E. *In Failing Health: The Medical Crisis and the AMA.* Indianapolis: Bobbs-Merrill;1970.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race.* New York: Routledge; 2000.

64. Byrd WM. An American health dilemma. *J Natl Med Assoc.* 1986;78:1025–1026.

Charatz-Litt C. A chronicle of racism: the effects of the white medical community on black health. *J Natl Med Assoc.* 1992;84:717–725.

Byrd WM, Clayton LA. *A Black Health Trilogy* [videotape and 188 page documentary report]. Washington, DC: The National Medical Association and the African American Heritage and Education Foundation; 1991.

Ayanian JZ. Race, class and the quality of medical care. *JAMA.* 1994;271:1207-1208.

Blustein J, Weitzman BC. Access to hospitals with high-technology cardiac services: how is race important? *Am J Public Health.* 1995;85:345–351.

Braveman P, Egerter S, Edmonston F, Verdon M. Racial/ethnic differences in the likelihood of caesarean delivery. *Am J Public Health.* 1995;85:625–630.

Breast cancer deaths decrease--but not among black women. *The Nation's Health,* February 1995:24.

Brennan TA, Hebert LE, Laird NM, et al. Hospital characteristics associated with adverse events and substandard care. *JAMA.* 1991;266:3265–3269.

Brooks DD, Smith DR, Anderson RJ. Medical apartheid, an American perspective. *JAMA*. 1991;266:2746–2749.

Carlisle DM, Leake B, Shapiro MF. Racial and ethnic differences in the use of invasive cardiac procedures among cardiac patients in Los Angeles County, 1986 through 1988. *Am J Public Health*. 1995;85: 352–356.

Council on Ethical and Judicial Affairs. Black-White disparities in health care. *JAMA*. 1990;263:2344–2346.

Chu J, Polisor L, Tamimi HK. Quality of care in women with stage 1 cervical cancer. *West J Med*. 1982;137:13–17.

Diehr P, Yergan J, Chu J, et al. Treatment modality and quality differences for black and white breast-cancer patients treated in community hospitals. *Med Care*. 1989;27:942–958.

Eisenberg JM. Sociologic influences on decision making by clinicians. *Ann Intern Med* 1979;318:158–163.

Elixhauser A, Ball JK. Black-White differences in colorectal tumor location in a national sample of hospitals. *J Natl Med Assoc*. 1994;86:449–458.

Escarce JJ, Epstein KR, Colby DC, Schwartz JS. Racial differences in the elderly's use of medical procedures and diagnostic tests. *Am J Public Health*. 1993;83:948–954.

Foster HW. Reaching parity for minority medical students: a possibility or a pipe dream? *J Natl Med Assoc*. 1996;88:1–-21.

Geiger HJ. Annotation: racism resurgent–building a bridge to the 19th century. *Am J Public Health*. 1997;87:1765–1766.

Geiger HJ. Comment: Ethnic cleansing in the groves of academe. *Am J Public Health*. 1998;88:1299–1300.

Hadley J, Steinberg E, Feder J. Comparison of underinsured and privately insured hospital patients. *JAMA* 1991;265:374–379.

Kahn KL, Pearson ML, Harrison ER, Desmond KA, Rodgers WH, et al. Health care for black and poor hospitalized Medicare patients. *JAMA*. 1994;271:1169–1174.

Keil JE, Sutherland SE, Knapp RG, Tyrder HA. Does equal socioeconomic status in black and white men mean equal risk of mortality? *Am J Public Health*. 1992;82:1133–1136.

Kong D. Study: minorities' health lags. *The Boston Globe*. Thursday, April 23, 1992:1.

Krieger N. Analyzing socioeconomic and racial/ethnic patterns in health and health care. *Am J Public Health*. 1993;83:1086-1087.

Jones JH. *Bad Blood: The Tuskegee Syphilis Experiment*. New York: The Free Press; 1981.

McBride D. Inequality in the availability of Black physicians. *New York State J Med* 1985;85:139–142.

McBride D. *From TB to AIDS. Epidemics Among Urban Blacks Since 1900*. Albany, New York: State University of New York Press; 1991.

McWhorter WP, Moyer WJ. Black-white differences in type of initial breast cancer treatment and implications for survival. *Am J Public Health*. 1987;77:1515–1517.

Peterson ED, Wright SM, Doley J, Thibault GE. Racial variations in cardiac procedure use and survival following acute myocardial infarction in the Department of Veterans Affairs. *JAMA*. 1994;271: 1175–1180.

Rice MF. Inner-city hospital closures/relocations: race, income status and legal issues. *Soc Sci Med*. 1987;24:889–896.

Schwartz E, Kofie VY, Rivio M, Tuekson RV. Black/white comparisons of deaths preventable by medical intervention: United States and the District of Columbia, 1980-1986. *Int J Epidemiol*. 1990;19:591–598.

Sorlie P, Rogot E, Anderson R, Johnson NJ, Blacklund E. Black-white mortality differences by family income. *Lancet*. 1992;340: 346–350.

Washington HA. Medicine's mainstream overlooks blacks. *Emerge*. 1996;7:22.

Washington HA. Piece of the genetic puzzle is left out. *Emerge*. 1997;8:30.

Wenneker MB, Epstein AM. Racial inequalities in the use of procedures for patients with ischemic health disease in Massachusetts. *JAMA*. 1990;263:2344–2346.

Whittle J, Conigliaro J, Good CB, Lofgren RP. Racial differences in the use of invasive cardiovascular procedures in the department of veterans affairs medical system. *N Engl J Med*. 1993;329:621–627.

Yergan J, Flood AB, Lo Gerfo JP, Diehr P. Relationship between patient race and the intensity of hospital services. *Med Care*. 1987;25: 592–603.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race*. New York: Routledge; 2000.

65. Morais HM. *The History of the Negro in Medicine*. Under auspices of The Association for the Study of Negro Life and History. New York: Publishers Company, Inc., 1967.

Cobb WM. The black American in medicine. *J Natl Med Assoc*. 1981;73(suppl 1):1183–1244.

Byrd WM, Clayton LA. *An American Health Dilemma: A Medical History of African Americans and the Problem of Race*. New York: Routledge; 2000.

66. Wing KR, Rose MG. Health facilities and the enforcement of civil rights. In: Roemer R, McKray G, eds. *Legal Aspects of Health Policy: Issues and Trends*. Westport, CT: Greenwood Press; 1980.

Lief BJ. Legal and administrative barriers to health care. *New York State J Med*. 1985;85:126–127.

McBride AD. Racial equality in the American health care system: an unfulfilled ideal. *New York State J Med*. 1985;85:125.

67. Haynes MA. The gap in health status between black and white Americans. In: Williams RA, ed. *Textbook of Black-Related Diseases*. New York: McGraw-Hill; 1975:1–30.

Byrd WM, Clayton LA. An American health dilemma: a history of blacks in the health system. *J Natl Med Assoc*. 1992;84:189–200.

Byrd WM, Clayton LA. *A Black Health Trilogy* [videotape and 188 page documentary report]. Washington, DC: The National Medical Association and the African American Heritage and Education Foundation; 1991.

Sidel VW, Sidel R, eds. *Reforming Medicine: Lessons of the Last Quarter Century*. New York: Pantheon Books; 1984.

68. Shea S, Fullilove MT. Entry of black and other minority students into US medical schools: historical perspective and recent trends. *N Engl J Med*. 1985;313:933–940.

Strelnick H, Younge R. Affirmative action in medicine: money becomes the admissions criteria of the 1980s. In: Sidel VW, Sidel R, eds. *Reforming Medicine: Lessons of the Last Quarter Century*. New York: Pantheon Books, 1984:151–175.

69. Haynes MA. The gap in health status between black and white Americans. In: Williams RA, ed. *Textbook of Black-Related Diseases*. New York: McGraw-Hill; 1975:1–30.

Hacker A. Two Nations: *Black and White, Separate, Hostile, Unequal*. New York: Ballantine Books; 1992.

70. National Center for Health Statistics. *Health United States, 1995*. Hyattsville, MD: Public Health Service; 1996.

Greenberg DS. Black health: grim statistics. *The Lancet*. 1990;355:780–781.

Livingston IL, ed. *Handbook of Black American Health: The Mosaic of Conditions, Issues, Policies, and Prospects*. Westport, CT: Greenwood Press; 1994.

Braithwaite RL, Taylor SE, eds. *Health Issues in the Black Community*. San Francisco: Jossey-Bass Publishers; 1992.

71. Wilson WJ. *The Declining Significance of Race: Blacks and Changing American Institutions*. Chicago: University of Chicago Press; 1978.

Wilson WJ. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Chicago: University of Chicago Press; 1987.

Massey DS, Denton NA. *American Apartheid: Segregation and the Making of the Underclass*. Cambridge, MA: Harvard University Press; 1993.

Wilson WJ. *When Work Disappears: The World of the New Urban Poor*. New York: Alfred A. Knopf; 1996.

72. Jones W, Rice MF. *Health Care Issues in Black America: Policies, Problems, and Prospects.* Westport, CT: Greenwood Press; 1987.

Ginzberg E. Improving health care for the poor: lessons from the 1980s. *JAMA.* 1994;271:464–467.

Lewis S. *Hospital: An Oral History of Cook County Hospital.* New York: The New Press; 1994.

Dowling HF. *City Hospitals: The Undercare of the Underprivileged.* Cambridge, MA: Harvard University Press; 1982.

73. Geiger HJ. Comment: ethnic cleansing in the groves of academe. *Am J Public Health.* 1998;88:1299–1300.

Shea S, Fullilove MT. Entry of black and other minority students in US medical schools: Historical perspectives and recent trends. *N Engl J Med.* 1985;313:933–940.

Strelnick AH, Massad RJ, Bateman WB, Shepherd SD. Minority students in U.S. medical schools. *N Engl J Med.* 1986;315:67–68.

Komaromy M, Grumbach K, Drake M. The role of black and Hispanic physicians in providing health care for underserved populations. *N Engl J Med.* 1996;334:1305–1314.

Hanft RS, Fishman LE, Evans W. *Blacks and the Health Professions in the 80s: A National Crisis and a Time for Action.* Association of Minority Health Professions Schools; 1983.

Hanft RS, White CC. Constraining the supply of physicians: effects on black physicians. In: Willis DP, ed. *Health Policies and Black Americans.* Brunswick, NJ: Transaction Publishers; 1989:249–269.

74. Dowling HF. *City Hospitals: The Undercare of the Underprivileged.* Cambridge, MA: Harvard University Press; 1982.

Kosa J, Zola IK, eds. *Poverty and Health: A Sociological Analysis,* revised. Cambridge, MA: Harvard University Press; 1975.

Bullough B, Bullough VL. *Poverty, Ethnic Identity, and Health Care.* New York: Appleton-Century-Crofts, 1972.

75. Greenberg DS. Black health: grim statistics. *Lancet.* 1990;355:780–781.

Wilson WJ. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy.* Chicago: University of Chicago Press; 1987.

Massey DS, Denton NA. *American Apartheid: Segregation and the Making of the Underclass.* Cambridge, MA: Harvard University Press; 1993.

McCord C, Freeman HP. Excess mortality in Harlem. *N Engl J Med.* 1990;322:173–177.

Wilson WJ. *When Work Disappears: The World of the New Urban Poor.* New York: Alfred A. Knopf; 1996.

Johnson H, Broder DS. *The System: The American Way of Politics at the Breaking Point.* Boston: Little, Brown and Company; 1996.

Skocpol T. *Boomerang: Health Care Reform and the Turn Against Government.* New York: WW Norton; 1997

76. Chase A. *The Legacy of Malthus: The Social Costs of the New Scientific Racism.* New York: Knopf; 1980:xv.

77. Chase A. *The Legacy of Malthus: The Social Costs of the New Science.* New York: Knopf; 1990.

Tucker WH. *The Science and Politics of Racial Research.* Urbana, Illinois: University of Illinois Press; 1994.

Herrnstein RJ, Murray C. *The Bell Curve: Intelligence and Class Structure in American Life.* New York: The Free Press; 1994.

Allen GE. Eugenics comes to America. In: Jacoby R, Glauberman N, eds. *The Bell Curve Debate: History, Documents, Opinions.* New York: Random House; 1995:441–475.

Fraser S, ed. *The Bell Curve Wars: Race, Intelligence, and the Future of America.* New York: Basic Books, 1995.

Guthrie RV. *Even the Rat Was White: A Historical View of Psychology,* 2nd ed. Boston: Allyn and Bacon; 1998.

Byrd WM. Race, biology, and health care: reassessing a relationship. *J Health Care Poor Underserved.* 1990;1:278–292

Byrd WM, Clayton LA. An American health dilemma: A history of blacks in the health system. *J Natl Med Assoc.* 1992;84:189–200.

Bynum WF, Browne EJ, Porter R, eds. *The Dictionary of the History of Science.* New York: Macmillan Press; 1981.

Jones JH. *Bad Blood: The Tuskegee Syphilis Experiment.* New York: The Free Press; 1981.

78. Chase A. *The Legacy of Malthus: The Social Costs of the New Scientific Racism.* New York: Alfred A. Knopf, 1980:xvi.

79. Reed J. Scientific racism. In: Wilson CR, Ferris W, eds. *Encyclopedia of Southern Culture.* Chapel Hill: University of North Carolina Press; 1989:1358–1360.

Churchill LR. *Rationing Health Care in America: Perceptions and Principles of Justice.* Notre Dame, IN: University of Notre Dame Press; 1987.

Dula A. Toward an African-American perspective on bioethics. *WI.* 1991;2:259–269.

Gould SJ. *The Mismeasure of Man.* New York: W.W. Norton and Company, 1981.

Haller Jr JS. *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority, 1859-1900. New York: McGraw; 1971.*

Stanton W. The Leopard's Spots: Scientific Attitudes Toward Race in America, 1815–1859. Chicago: University of Chicago Press; 1960.

Byrd WM. Race, biology, and health care: Reassessing a relationship. *J Health Care Poor Underserved* 1990;1:278–292.

80. Reed J. Scientific racism. In: Wilson CR, Ferris W, eds. *Encyclopedia of Southern Culture.* Chapel Hill: University of North Carolina Press;1989:1358–1360.

Weisbord RG. *Genocide? Birth Control and the Black American.* Westport, CT: Greenwood Press; 1975.

Washington HA. Medicine's mainstream overlooks blacks. *Emerge.* 1996;7:22.

Churchill LR. *Rationing Health Care in America: Perceptions and Principles of Justice.* Notre Dame, IN: University of Notre Dame Press; 1987.

Dula A. Toward an African-American perspective on bioethics. *WI.* 1991;2:259–269;

Gans HJ. *The War Against the Poor: The Underclass and Antipoverty Policy.* New York: Basic Books, 1995.

Charatz-Litt C. A chronicle of racism: the effects of the white medical community on black health. *J Natl Med Assoc.* 1992;84:717–725.

Fineberg KS, Peters JD, Willson JR, Kroll DA. *Obstetrics/Gynecology and the Law.* Ann Arbor: Health Administration Press;1984:232–234.

Washington HA. Of men and mice: Human guinea pigs: unethical testing targets blacks and the poor. *Emerge.* 1994;6:24

Lemann N. The structure of success in America: The untold story of how educational testing became ambition's gateway--and a national obsession. *The Atlantic Monthly.* 1995;276:41.

Lemann N. The great sorting: The first mass administrations of a scholastic-aptitude test led with surprising speed to the idea that the nation's leaders would be the people who did well on tests. *The Atlantic Monthly.* 1995;276:84.

Haller Jr. JS. *Outcasts from Evolution: Scientific Attitudes of Racial Inferiority, 1859-1900.* New York: McGraw Hill; 1971

Kovel J. *White Racism: A Psychohistory.* New York: Random House, 1970.

81. Allen GE. Eugenics comes to America. In: Jacoby R, Glauberman N, eds. *The Bell Curve Debate: History, Documents, Opinions.* New York: Random House; 1995:441–475.

Kamin LJ. The pioneers of IQ testing. In: Jacoby R, Glauberman N, eds. *The Bell Curve Debate: History, Documents, Opinions.* New York: Random House; 1995:476–509.

Proctor RN. *Racial Hygiene: Medicine under the Nazis.* Cambridge, MA: Harvard University Press; 1988.

Beardsley EH. *A History of Neglect: Health Care for Blacks and Mill Workers in the Twentieth Century South.* Knoxville: University of Tennessee Press; 1987.

Cobb WM. *Medical Care and the Plight of the Negro.* New York: The National Association for the Advancement of Colored People; 1947.

Takaki RY. *Iron Cages: Race and Culture in Nineteenth-Century America.* New York: Knopf; 1979.

Stannard DE. *American Holocaust: Columbus and the Conquest of the New World.* New York: Oxford University Press; 1992.

Lifton RJ. *The Nazi Doctors: Medical Killing and the Psychology of Genocide.* New York: Basic Books, Inc., Publishers, 1986.

Arad Y, ed. *The Pictorial History of the Holocaust.* New York: Macmillan Publishing Company, 1990.

Smith JD, Nelson KR. *The Sterilization of Carrie Buck.* Far Hills, NJ: New Horizon Press; 1989.

Weisbord RG. *Genocide? Birth Control and the Black American.* Westport, CT: Greenwood Press; 1975.

O'Reilly K. *Nixon's Piano: Presidents and Racial Politics from Washington to Clinton.* New York: The Free Press; 1995.

Washington HA. Of men and mice: human guinea pigs: unethical testing targets blacks and the poor. *Emerge.* 1994;6:24.

Washington HA. Henrietta Lacks–an unsung hero. *Emerge.* 1994; 6:29.

82. Cobb WM. *Medical Care and the Plight of the Negro.* New York: The National Association for the Advancement of Colored People, 1947.

Cobb WM. *Progress and Portents for the Negro In Medicine.* New York: The National Association for the Advancement of Colored People, 1948.

Reynolds PP. The federal government's use of Title VI and Medicare to racially integrate hospitals in the United States, 1963 through 1967. *Am J Public Health* 1997; 87:1850–1858.

Gamble VN. Hospitals, Black. 1305–1309. In: Salzman J, Smith DL, West C. eds. *Encyclopedia of African-American Culture and History.* New York: Macmillan, 1996:1305–1309.

Gamble VN. Under the shadow of Tuskegee: African Americans and health care. *Am J Public Health.* 1997;87:1773–1778.

Gamble VN. *Making a Place for Ourselves: The Black Hospital Movement 1920–1945.* New York: Oxford University Press; 1995.

Bell CC. Impaired black health professionals: vulnerabilities and treatment approaches. *J Natl Med Assoc.* 1986;78:925–930.

Geiger HJ. Annotation: racism resurgent–building a bridge to the 19th century. *Am J Public Health.* 1997;87:1765–1766.

Geiger HJ. Comment: Ethnic cleansing in the groves of academe. *Am J Public Health.* 1998;88:1299–1300.

O'Bannon LC. Are African-American doctors being locked out? The down side of managed care. *NMA News.* 1995(Winter):1.

Byrd WM. Inquisition, peer review, and black physician survival. *J Natl Med Assoc.* 1987;79:1027–1029.

Byrd WM, Clayton LA, Kinchen K, Richardson D, Lawrence L, Butcher R, et al. African-American physicians' views on health reform: preliminary results of a survey. *J Natl Med Assoc.* 1994;86:93–94.

Byrd WM, Clayton LA, Kinchen K, Richardson D, Lawrence L, Butcher R, et al. African-American physicians' views on health reform: results of a survey. *J Natl Med Assoc.* 1994;86:191–199.

Lavizzo-Mourey R, Clayton LA, Byrd WM, Johnson III G, Richardson D. The perceptions of African-American physicians concerning their treatment by managed care organizations. *J Natl Med Assoc.* 1996;88:210–214.

83. Geiger HJ. Comment: Ethnic cleansing in the groves of academe. *Am J Public Health.* 1998;88:1299–1300, 1299.

84. Kinder DR, Sanders LM. *Divided by Color: Racial Politics and Democratic Ideals.* Chicago: University of Chicago Press; 1996.

Sniderman PM, Piazza T. *The Scar of Race.* Cambridge, MA: Belknap Press of Harvard University Press; 1993.

Sniderman PM, Carmines EG. *Reaching Beyond Race.* Cambridge, MA: Harvard University Press; 1997.

Schuman H, Steeh C, Bobo L, Krysan M. *Racial Attitudes in America: Trends and Interpretations,* revised. Cambridge, MA: Harvard University Press; 1997.